

GENDER MATTERS



SNSF Annual Meeting, October 2014

Priya Natarajan
Yale University

ON THE TRAIL OF A FEW STUDIES

Moss-Racusin & Handelsman (2012)

Resume study of undergraduates looking for a summer internship in a lab; Male and Female Chairs; mix of universities

Hiring, Salary, Mentoring

Winneras & Wold (1995)

Postdoctoral Fellowship, Swedish MRC, peer-review scores and evaluation

Gender Gap and Nepotism advantage (friendship bonus)

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

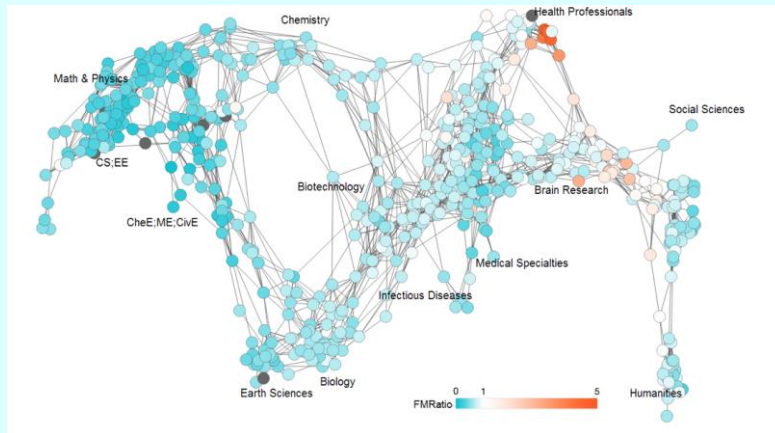
Significant Gender Disparity world over

BORNMANN, MUTZ & DANIEL (2008)

Meta-analysis of gender differences in grant peer-review

~7% gender penalty

Global Bibliometrics by Gender



The Challenge in Academia the need for re-framing

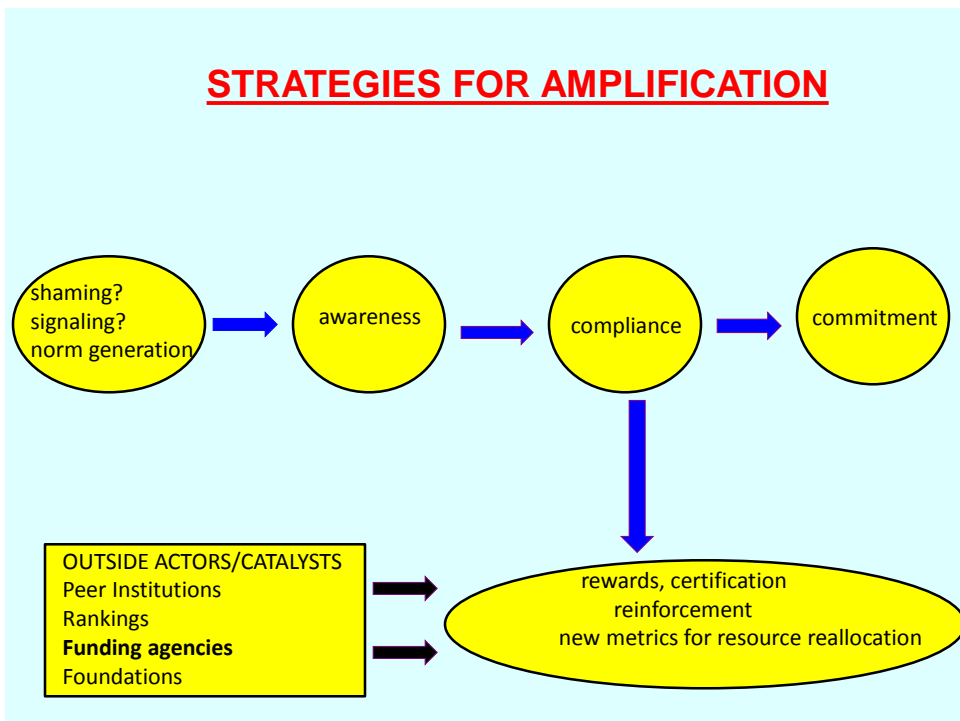
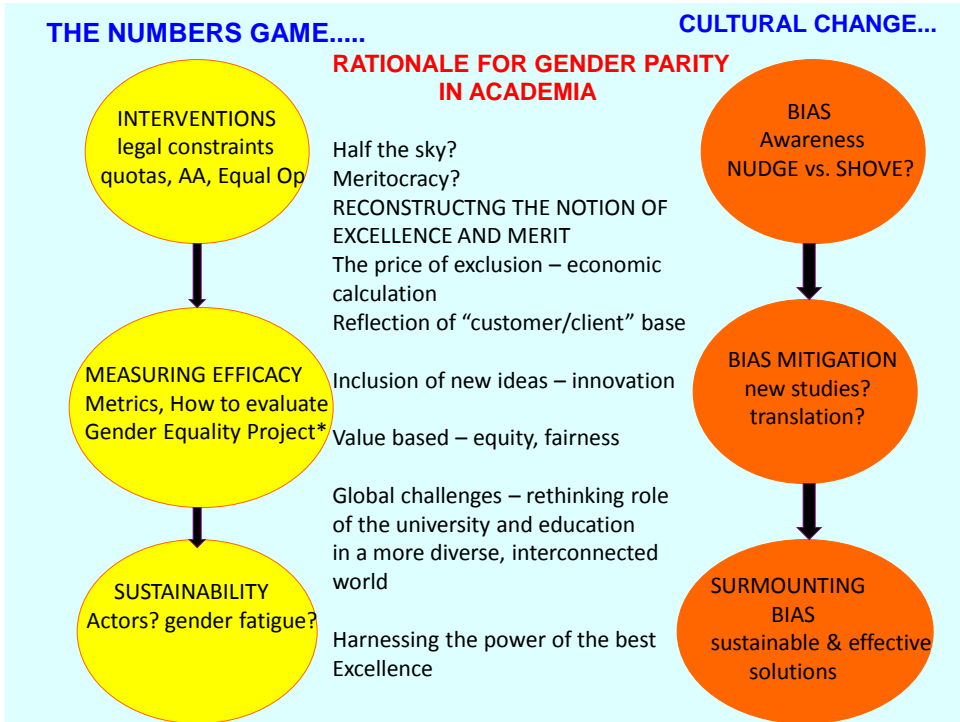
DEMOGRAPHIC DIMENSION Opening the door – and keeping it open and flowing
Discipline specific challenges



CULTURAL DIMENSION **WHAT TO DO ABOUT UNCONSCIOUS BIAS?**
if its universal & inescapable?

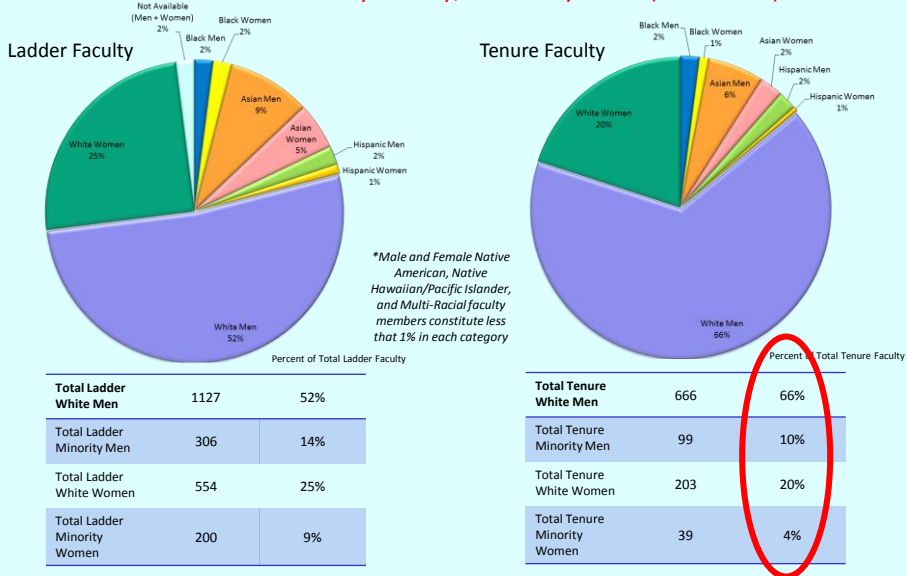
Conscious bias
Unconscious bias
Challenge in all disciplines

HOW TO GENERATE INSTITUTIONAL COMMITMENT
awareness=>compliance=>leads to commitment?



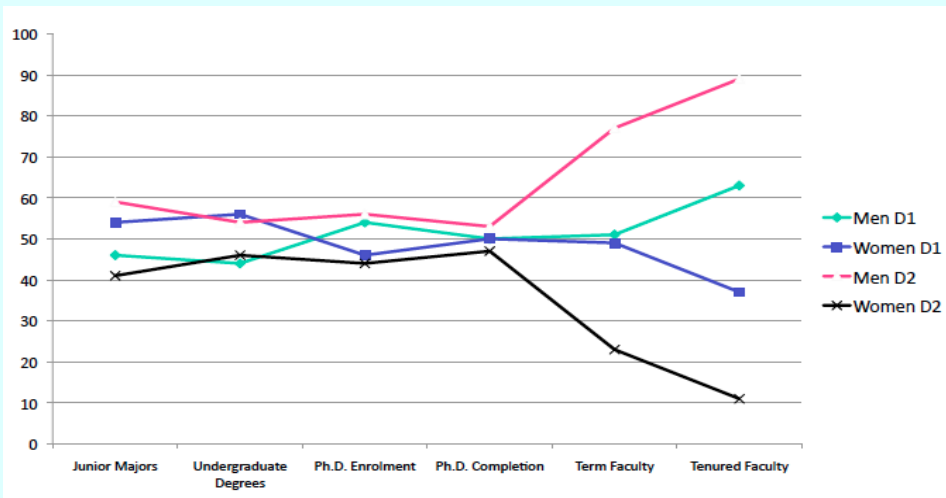
Where Are Women and Men of Color at Yale?

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



Source: Office of Institutional Research, University-Wide Headcounts, Race by Sex 2011-2012; OIR W105

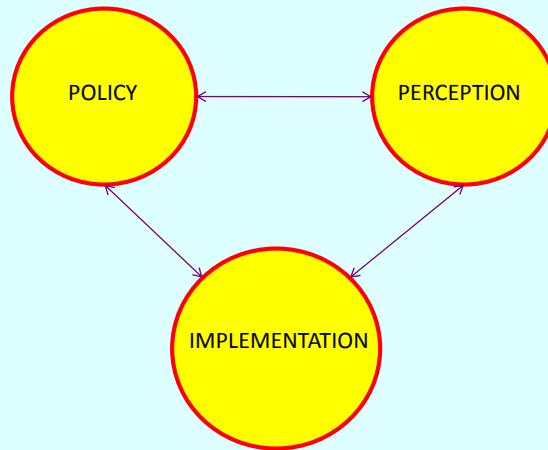
A Tale of Two Pipelines



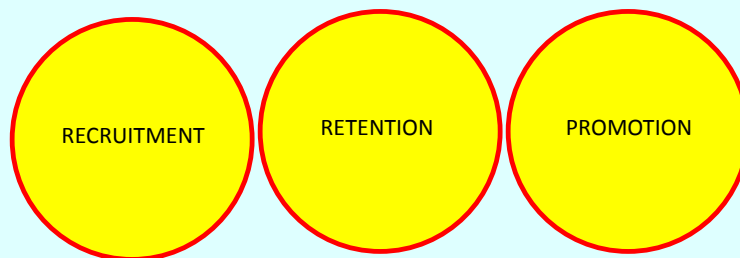
The Challenge of STEM

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





GENDER EQUALITY SELF-ASSESSMENT

KEY FINDINGS 2013

YALE UNIVERSITY

TRIANGULATION OF POLICY ARTICULATION, PERCEPTION & IMPLEMENTATION

INPUTS: DEMOGRAPHIC DATA, FACULTY SURVEY, POLICY QUESTIONNAIRE

FUNDED BY THE SLOAN FOUNDATION

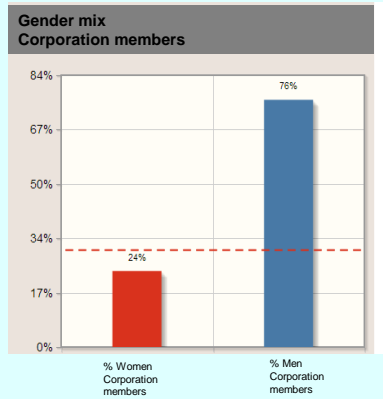


The results of the EDGE gender equality assessment are based on an analysis of the following sources of information, as provided by the organization:

- **Yale University statistics** covering the period January to December 2012
- the responses from 176 surveyed employees (19% of the total workforce) to the 21 **survey** questions
 - the answers to the additional customized 10 questions are to be found in the attached excel file
- 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 below



Key Metrics

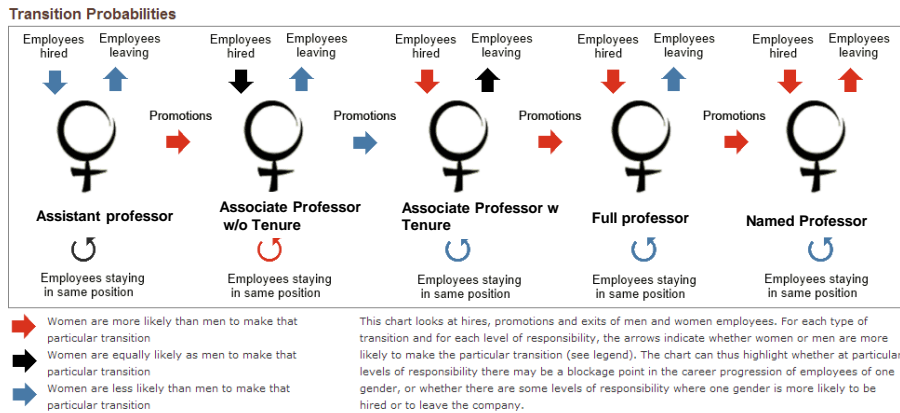


Note: The trendline at 30% indicates the threshold that needs to be reached in order for a historically under-represented sub-group to start having a voice in the decision making process of the larger group.



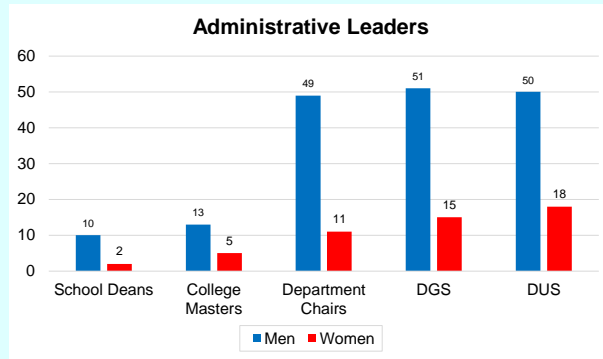
Career Progression

This page presents an overview of the career progression opportunities for men and women at Yale University. It includes a comparative representation of the transitions men and women make at Yale University (hires, promotions, leaves).





Key Metrics



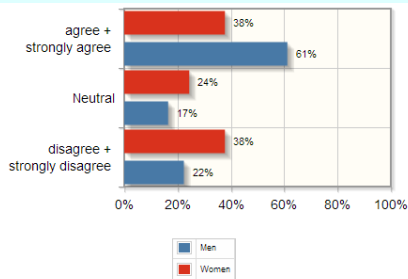
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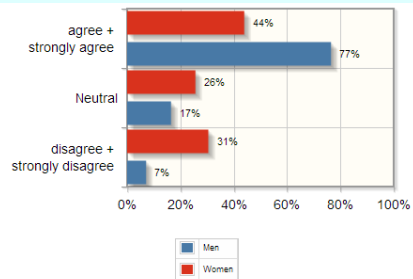
Key Metrics

Employees' rating of Yale University on gender equality

I believe that women and men are given the same opportunities to be hired at Yale University



I am given fair opportunities to be promoted at Yale



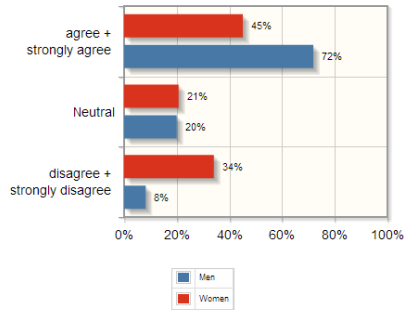
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Gap Analysis

This section contrasts employees' perceptions, as captured through key survey questions, with the corresponding information submitted by Yale University in the data tables and the Policies & Practices questionnaire.

I am familiar with the criteria for promotion from my current position to the next higher position



Level of implementation of corresponding practice as per Policies & Practices questionnaire:

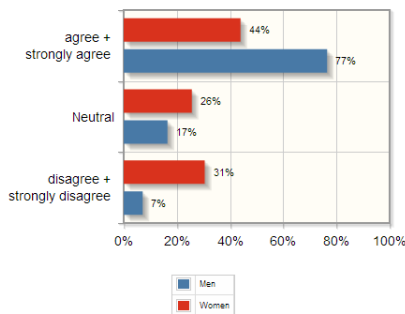
Yale University openly communicates on its promotion process and criteria.



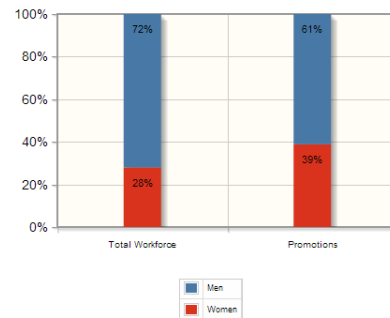
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I am given fair opportunities to be promoted at Yale



Gender mix of workforce and promotions

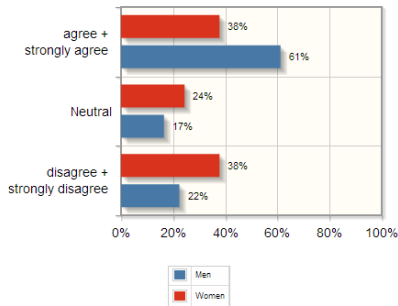




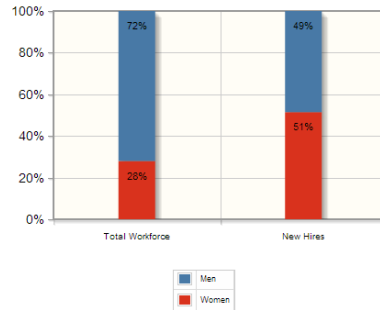
Gap Analysis

This section contrasts employees' perceptions, as captured through key survey questions, with the corresponding information submitted by Yale University in the data tables and the Policies & Practices questionnaire.

I believe that women and men are given the same opportunities to be hired at Yale University



Gender mix of workforce and new hires



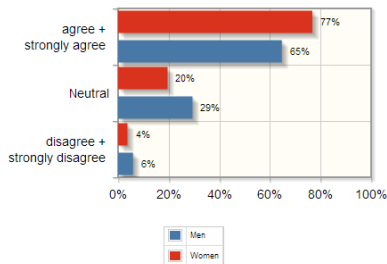
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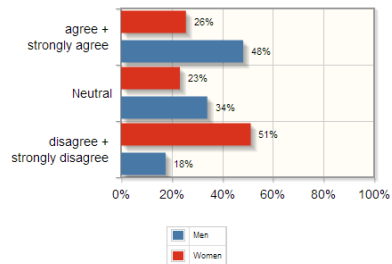
Gap Analysis

This section contrasts employees' perceptions, as captured through key survey questions, with the corresponding information submitted by Yale University in the data tables and the Policies & Practices questionnaire.

I believe that having a career and a family are compatible for men at Yale



I believe that having a career and a family are compatible for Women at Yale



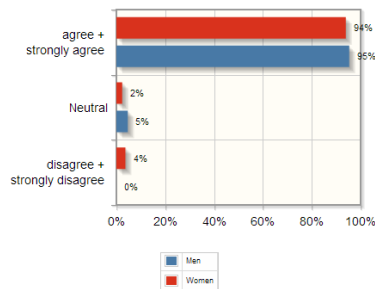
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Gap Analysis

This section contrasts employees' perceptions, as captured through key survey questions, with the corresponding information submitted by Yale University in the data tables and the Policies & Practices questionnaire.

I believe that equality of opportunity for men and women is important for Yale to remain competitive in the world



Level of implementation of corresponding practice as per Policies & Practices questionnaire:

Gender equality is part of the company's strategic goals

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Challenges and Barriers to Progress

- Implicit and explicit bias – in hiring and retention
- Hostile/Unwelcoming climate
- Family and Care commitments
- Industry competition
- Small community and/or weak institutional support systems for women and minority faculty
- Institutional culture and climate
- Lagging retirement

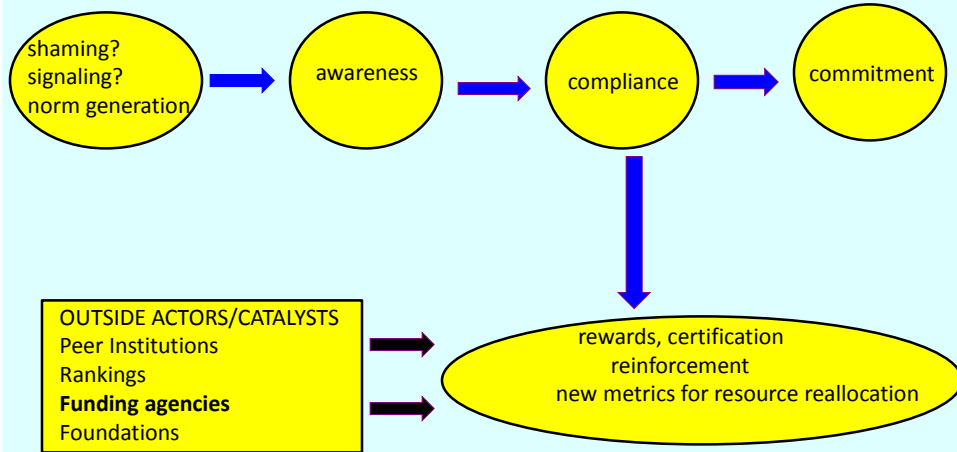
Interventions: How we improve

- 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

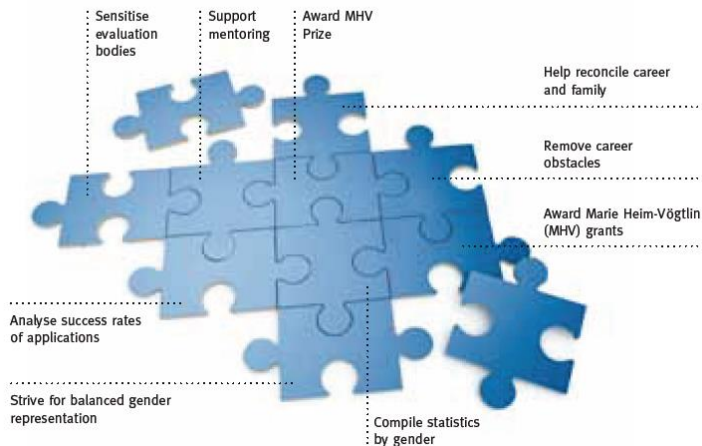
POLICY INTERVENTIONS

- **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)

STRATEGIES FOR AMPLIFICATION



What we do...



NSF COULD BE A STRONG CHANGE AGENT AND CATALYZE LONG TERM INSTITUTIONAL CHANGE IN ACADEMIC CULTURE

Ten Years of Equal Opportunities in Research Funding, Eds. Widmer & Knaus

CURRENT SNSF INITIATIVES

Clear signaling from leadership

- sensitization to inequities
- men and women
- young and old
- native & foreign
- family commitments versus those without

Gender and Research Funding Report & Recommendations

- replacement of biological age by academic age
- measures for child bearing and care gaps
- flexible and part-time work
- mobility grants
- early stage grants & prizes

GEFO REPORT Leemann & Stutz 2008

WHAT CAN SNSF 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
- Fellowships with stays abroad and international networking opportunities
- Hosting regular high profile international conferences in high-priority areas