



## Plenary Panel #3 / Séance plénière 3

Concrete Measures for Structural Change: Towards Gender Equality  
and Diversity Within Academia

Mesures concrètes pour favoriser un changement structurel : vers  
l'égalité entre les genres et la diversité dans le milieu universitaire

**Concrete Measures for  
Structural Change: Toward  
Gender Equity and Diversity  
Within Academia**

**Carl E. James**

**Jean Augustine Chair in Education, Community and Diaspora**

**Faculty of Education**

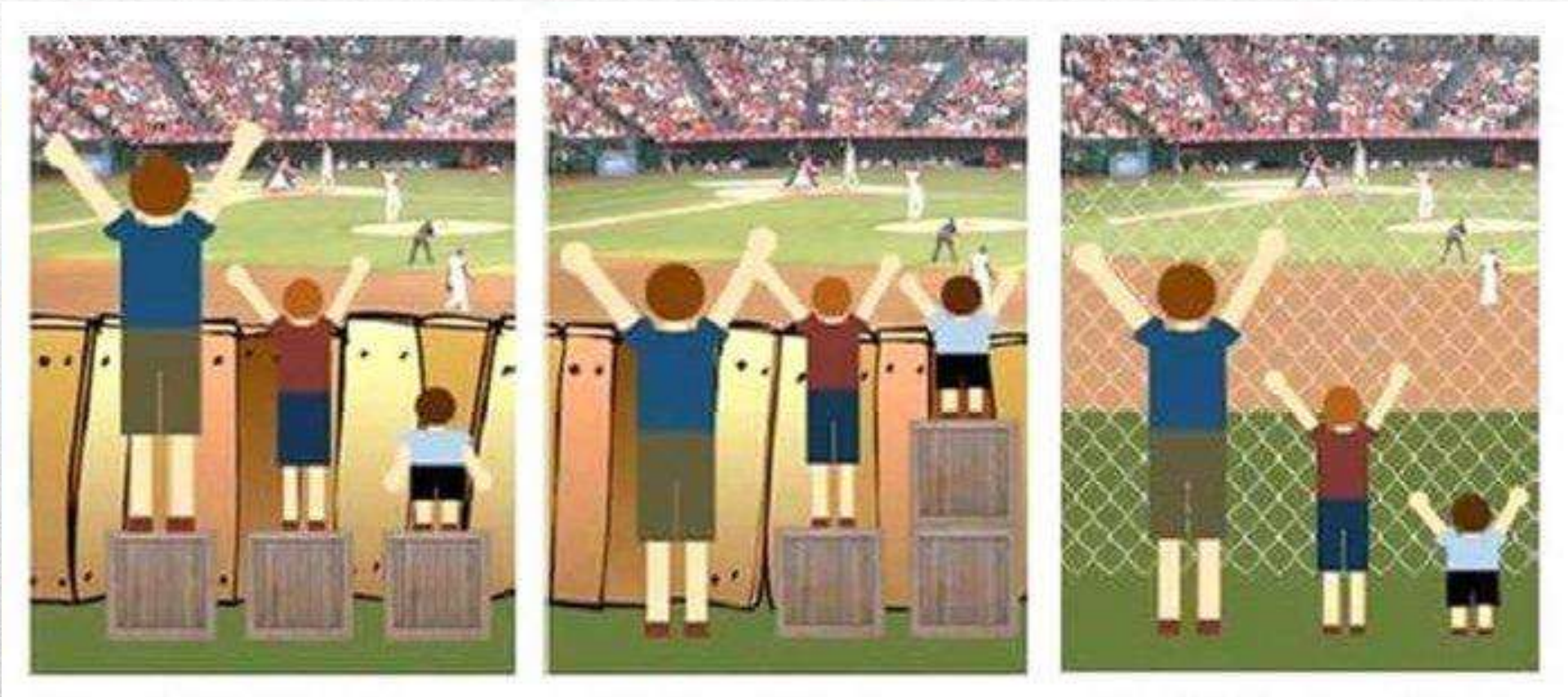
**York University**

**Gender Summit 11**

**November 6, 2017**

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# Equality, Equity and the Ultimate Goal



# The Data

## Aggregate Data

	Total	Men	Women	Vis Min	Indig
Leadership Teams	115	62.6%	37.4%	6.1%	0
Leadership Pipeline	212	68.9%	31.1%	6.1%	0.5%

## Disaggregated by Gender and Race Combined

	TOTAL	MEN			WOMEN		
		White	Vis Min	Indig	White	Vis Min	Indig
Leadership Teams	115	56.5%	6.1%	0	37.4%	0	0
Leadership Pipeline	212	64.1%	4.2%	0.5%	29.2%	1.9%	0

CANADIAN UNIVERSITY REPORT – DEMOGRAPHICS

## Lack of faculty diversity can affect studies and career aspirations



Tiffany Gordon, a PhD student in philosophy at Dalhousie University in Halifax: "Being surrounded by philosophers and academics of colour who were successful professors made me think there might be room in philosophy for me."

DARREN CALABRESE/THE GLOBE AND MAIL

**ANYA ZOLEDZIOWSKI**  
SPECIAL TO THE GLOBE AND MAIL

October 18, 2017

# Concrete Measures for Structural Change

- Collect and analyze disaggregated data, including race and religion
  - Be deliberate in recruiting diverse group of scholars
  - Consider the need to expose students (as well as colleagues) to diverse perspectives that will enrich the knowledge base of students and faculty members
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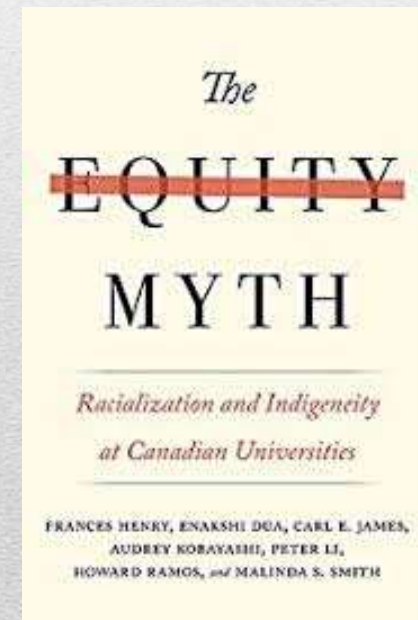
# Stop the leaky pipeline

- Getting Responses to Supervisor Inquiries for Graduate School (Milkman, Akinola & Chugh, 2015)
  - 87% of white males received a response versus 62 % of women and visible minority applicants
  - All professors (gender and ethnicity) preferentially responded to white males
  - All disciplines showed bias except fine arts; worst was business academia
  - 6548 professors, 89 disciplines and 259 universities
- Leads to early discouragement of disadvantaged groups to enter graduate school



# Remove barriers in the hiring process

- Reference letters
  - Reference letters are a critical academic passport
  - Differ for racialized scholars and women
- Recruitment at conferences
  - Conferences an important place for networking, gaining academic influence and increasing the chances you will be cited through podium presentations (Lewis 2001).



# It's not what you know, it's who you know...

- Who you know
  - Harder for racialized scholars and women to break into 'old boys' networks
  - Networks of white male scholars are commemorated in numerous ways perpetuating feelings of 'not belonging' and 'unworthiness'
  - Homosocial reproduction (Kanter, 1977, Roper, 1996)
- Critically reflect on the notion of "fit"
  - Want to believe that anyone who applies has an equal chance but not the case
  - Homosocial desire for sameness not diversity



# Getting to Equity and Diversity

- Understand the structural ways in which bias operates
    - Where you publish
    - With whom you publish
    - Reputation of publication and who assigns value
-

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- Zoledziowski, A. (2017, September). Lack of faculty diversity can affect studies and career aspirations. *Globe and Mail*. Special Report on Universities.

# Towards gender diversity in Engineering: goal setting, policies, and actions

The UBC Applied Science Case Study

ELIZABETH CROFT, SENIOR ASSOCIATE DEAN,  
FACULTY OF APPLIED SCIENCE, UBC



## UBC AT A GLANCE

- **61,113** students (Vancouver: **52,721**; Okanagan: **8,392**)
- **13,189** international students from 155 countries
- **12,841** degrees granted in 2015
- **306,000+** alumni in 140 countries
- **15,190** faculty and staff
- **\$2.3 billion** annual operating budget
- **\$600 million** per year in research funding for **8,766** projects
- **180** companies spun off from UBC research
- **\$12.5 billion** in economic impact
  
- **Applied Science:** Engineering, Planning, Architecture and Landscape Architecture, Nursing
  - ~**350** Faculty, **7000** undergrads, **1800** Grads



## GOAL – ARTICULATED IN 2013

Aim to reach 50% women in our **Engineering** programs (undergrad, grad, **faculty** – *focus of this presentation*).

Articulated by Dean and supported at the highest levels of the university.

Supported by findings from data, best practices based on data, and outcomes reported with data.



# Engineering Working Climate & Equity Study

- APSC & Faculty of Science (Vancouver campus)
  - Faculty survey
  - Focus group interviews
  - Policy review
- Women in Academic Leadership (APSC & Faculty of Medicine)
  - Women in Science initiatives

AN ASSESSMENT OF THE WORKING  
CLIMATE FOR ENGINEERING FACULTY AT  
THE UNIVERSITY OF BRITISH COLUMBIA

2012/2013

(VANCOUVER CAMPUS)



## KEY FINDINGS

- Need to improve transparency on workload and resource allocation.
- On majority of climate indicators women responded significantly less positively than their male peers.
- Job related discrimination reported by more than 50% women and only 6% men.
- On average women take 0.5 year longer to tenure, and 2.0 years longer to promotion to full professor.
- Concerns around recruitment rate and attrition rate.



## MAIN RECOMMENDATIONS

- Dean's office: Create **policies** on workload, maternity and parental leave, teaching and resource allocation, mentoring, and leadership development and **post on faculty intranet.**
- Departments: Develop and **\*formalize\* mentoring programs.**
- UBC: expanded **support** for **under-represented groups** for **leadership development.**
- Deans office: **Proactive strategy toward recruitment of women faculty** aligned with commitment to academic excellence.
- Dean's office: continue to track faculty progress **data.** Follow-up study in 5 years. Exit interviews with departing faculty.
- Deans office: support UBC's respectful environment policies.



## ACTIONS

- Faculty wide: repository for services, resources, policies and other information
  - Developed Faculty policy for Maternity, Parental and Adoption Leaves
- Departments: mentoring programs
- Faculty wide: women faculty lunches
- University: leadership development programs
- University and Faculty: Promotion workshops for women faculty (multi university)
- Faculty: Equity and implicit bias training for all hiring committees
- Faculty: Respectful environment training
  
- **Commitment** - 2017 Working Climate & Equity Study – Follow up!



# OUTCOMES

- 40% women assistant professors in engineering – significant change in hiring outcomes (up from 17% in 2012)
- Faculty wide commitment to diversity
- Access to and recognition of diversity benefits



# SUMMARY

**Goal** setting and support at highest level

**Data** to produce **findings**

Findings to generate **recommendations, policies**  
and **actions...**

... leading to reportable **outcomes.**





THE UNIVERSITY OF BRITISH COLUMBIA

THE UNIVERSITY OF BRITISH

# Balancing the gender equation in science

Shohini Ghose  
Wilfrid Laurier University

Female Nobel Laureates in physics...

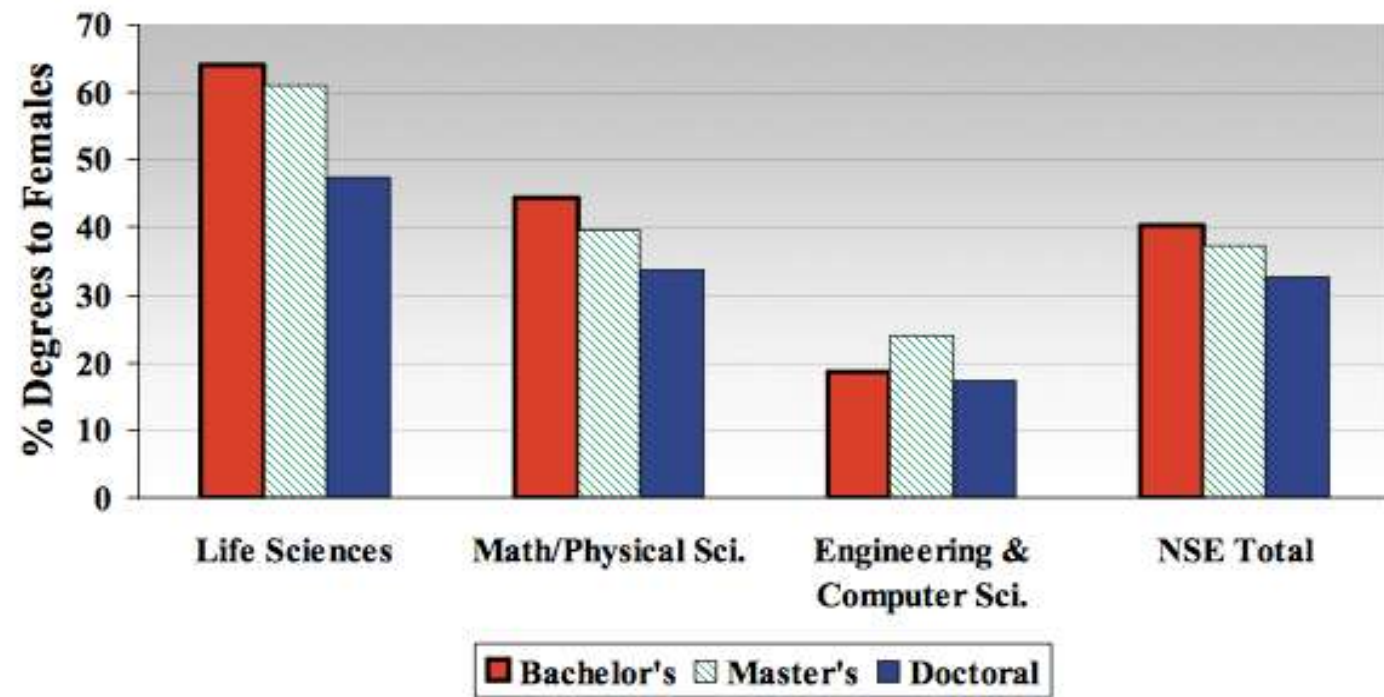
## Female Nobel Laureates in physics



Marie Curie (1903)

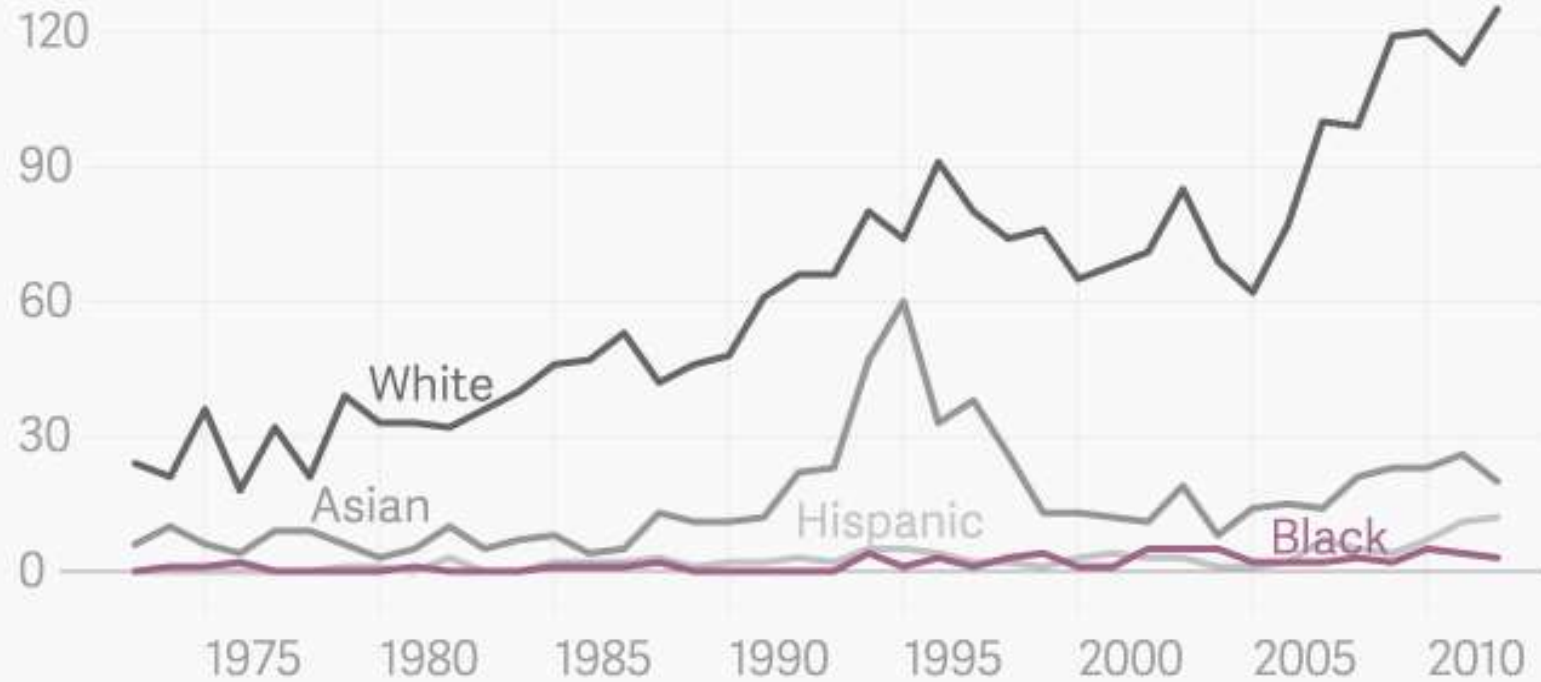


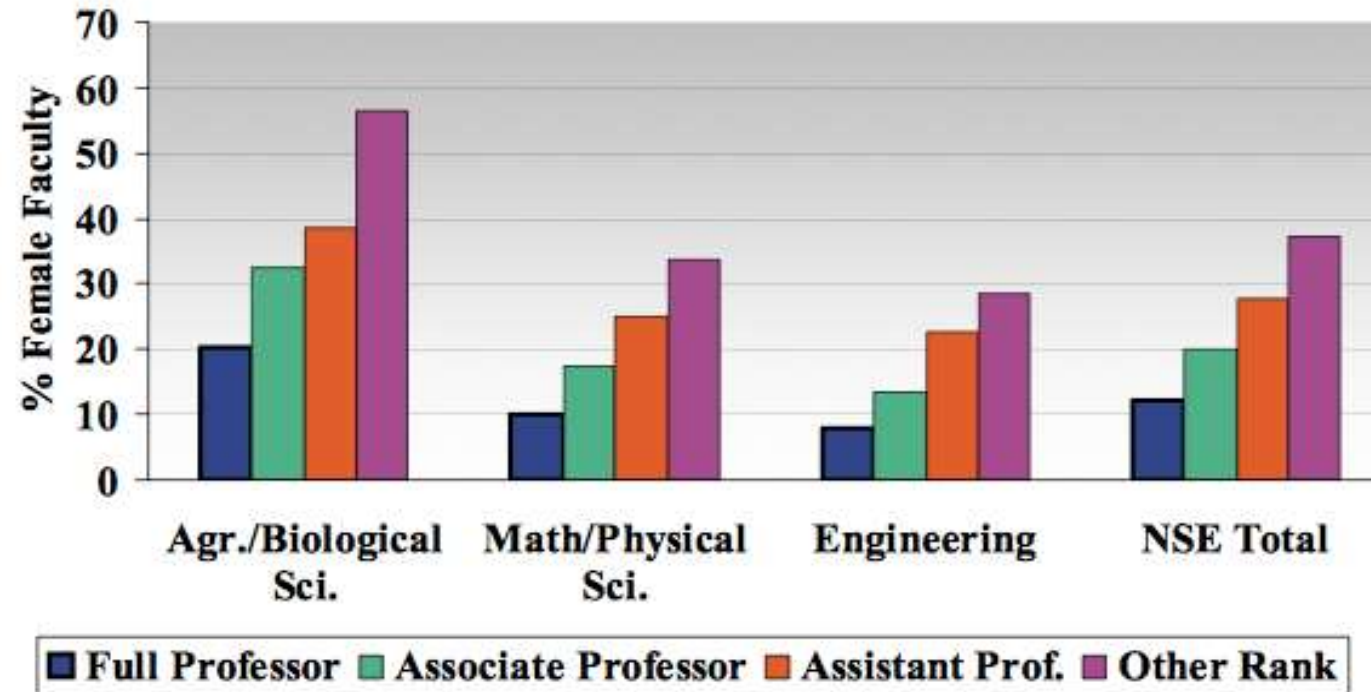
Maria Goeppert Mayer (1963)



Source: Statistics Canada.

## American women who earned physics doctorates in the US, by race

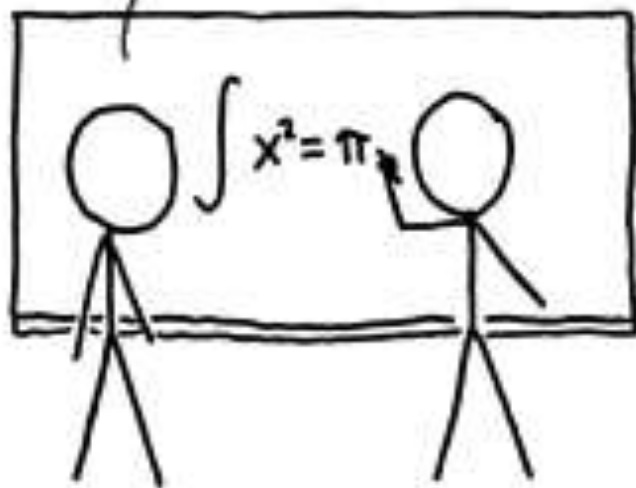




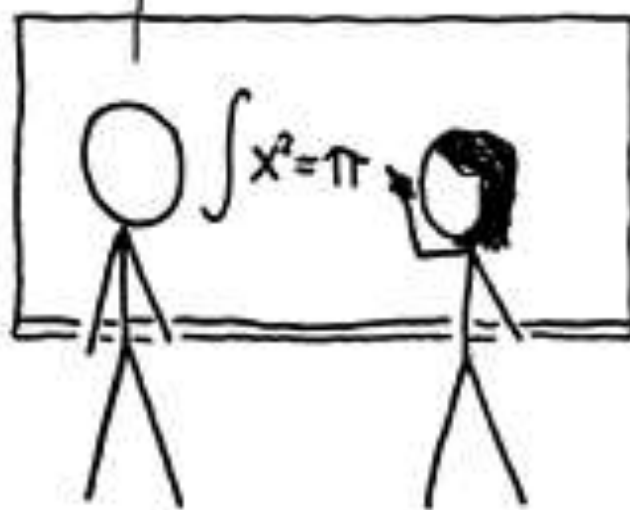
Source: Statistics Canada.

Physics: Assistant: 25%, Associate: 15.7%, Full: 5.6% (CAUT 2013-2014)

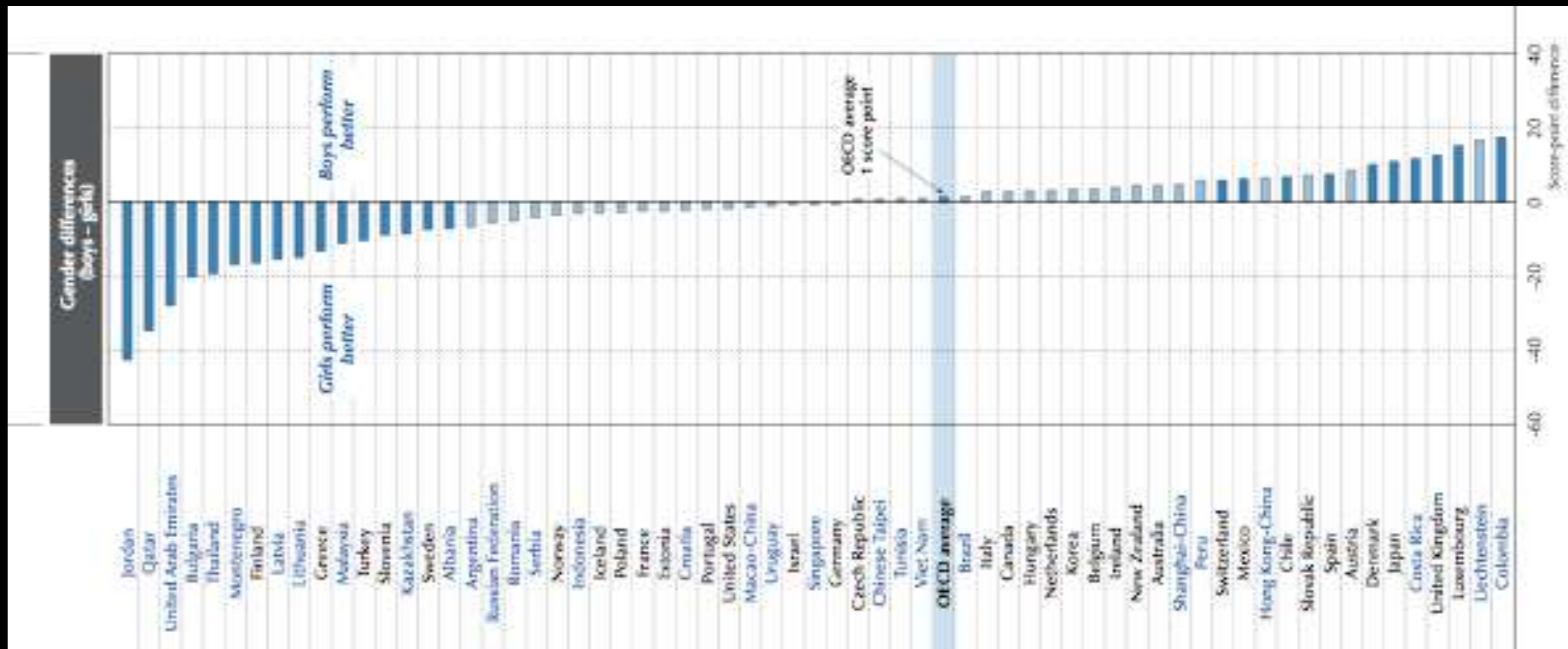
WOW, YOU  
SUCK AT MATH.



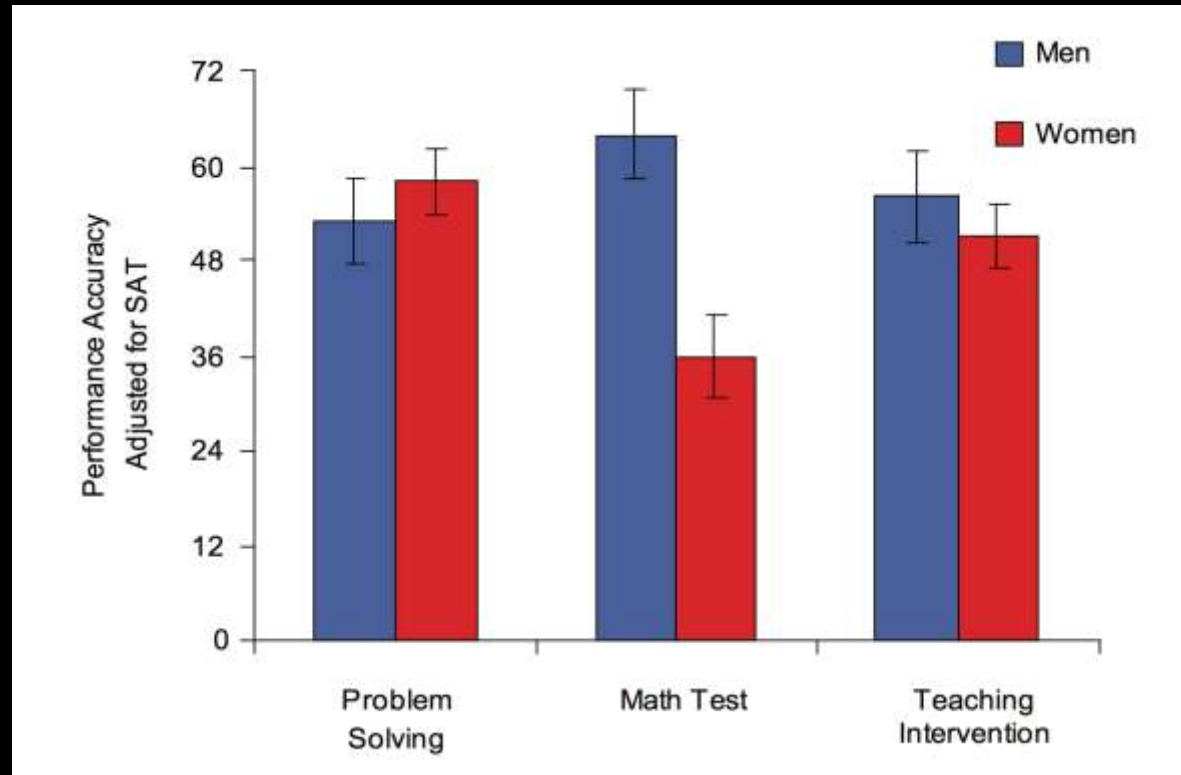
WOW, GIRLS  
SUCK AT MATH.



# PISA 2012: Science results across countries



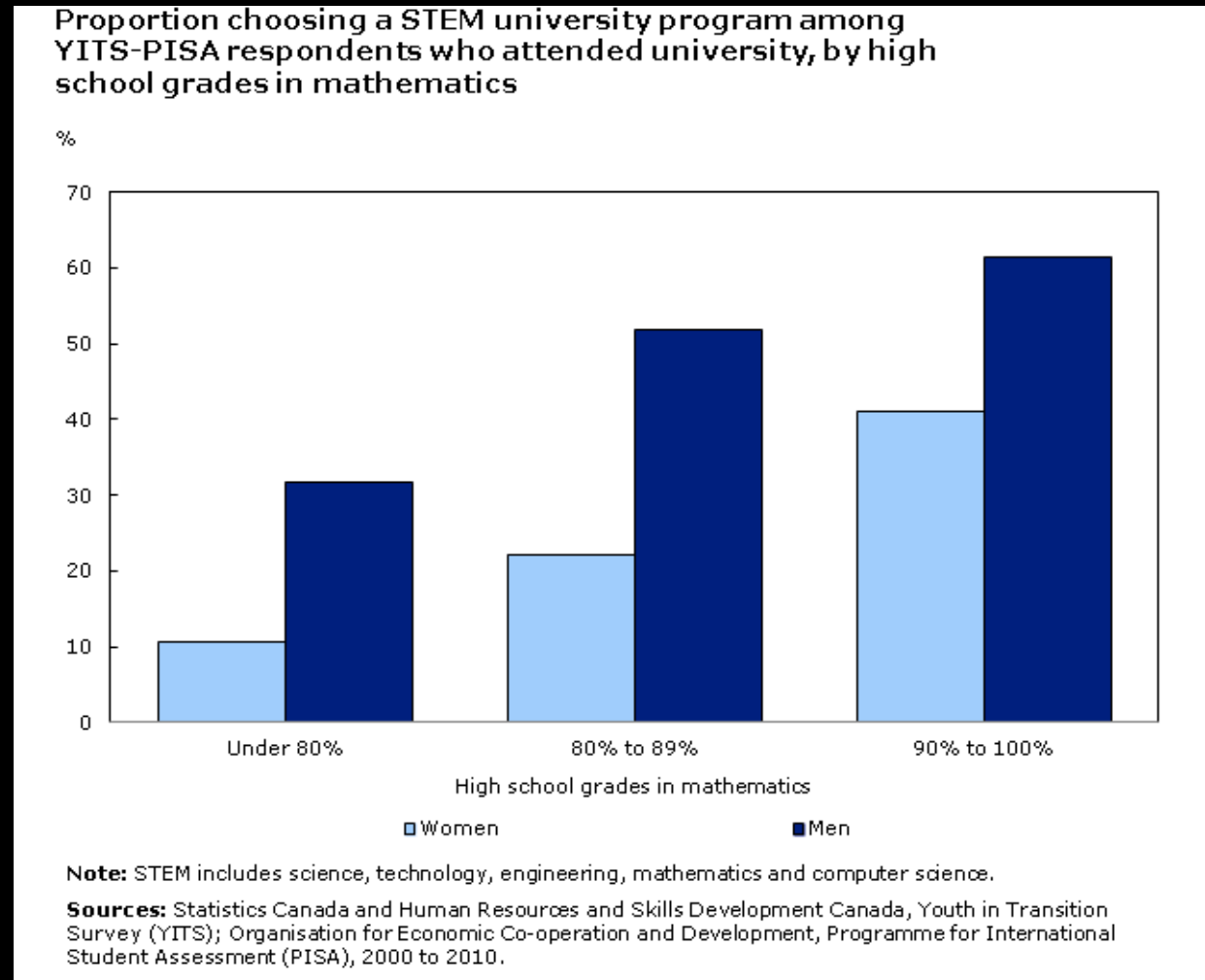
# Perceptions and environment



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# Math performance and university choices



Perceptions and environment

What does a scientist look like?

# Perceptions and environment

What does a scientist look like?



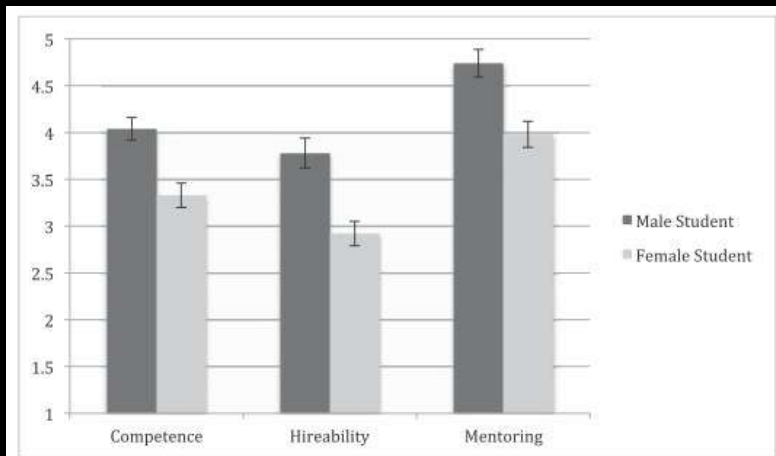
# Perceptions and environment

What does a scientist look like?



# Perceptions and environment

## Implicit bias



**Fig. 1.** Competence, hireability, and mentoring by student gender condition (collapsed across faculty gender). All student gender differences are significant ( $P < 0.001$ ). Scales range from 1 to 7, with higher numbers reflecting a greater extent of each variable. Error bars represent SEs.  $n_{\text{male student condition}} = 63$ ,  $n_{\text{female student condition}} = 64$ .



**Fig. 2.** Salary conferral by student gender condition (collapsed across faculty gender). The student gender difference is significant ( $P < 0.01$ ). The scale ranges from \$15,000 to \$50,000. Error bars represent SEs.  $n_{\text{male student condition}} = 63$ ,  $n_{\text{female student condition}} = 64$ .

# Perceptions and environment

## IUPAP Global Survey of physicists

- **Women were:**
  - **Less likely to have adequate resources**
  - **More likely to do majority of housework/childrearing**
  - **More likely to experience slower career advancement**

# Strategies for change

- Destroy invisibility
- Un-normalize
- Lay down the law
- Measure
- Connect





International Conference on Women in Physics  
Waterloo, Canada 2014



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# Female Scientists in Universities: Achievements and Challenges in their Academic Careers. The Peruvian Case.

Patricia Ruiz-Bravo  
With the collaboration of Aranxa Pizarro and Jimena Sánchez  
Pontifical Catholic University of Perú  
GENDER SUMMIT 11  
Montreal, Canada  
November 6th-8th, 2017



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# 4EqualScience: Women in Science in 5 universities from the Peruvian Network of Universities

**PURPOSE:** Analyze the academic careers of teachers and researchers in the areas of science and engineering in five public universities in different regions of Perú, in order to develop a diagnosis that allows the design of public policies of gender equality in science and technology at a national level.

## The universities analyzed were:

Nacional University of Trujillo  
Nacional University of San Agustín  
Nacional University of the Peruvian Amazon  
Nacional University San Antonio Abad of Cusco  
Nacional University of the Center of Peru





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# Methodology

- A **standardized survey** was applied to 713 teachers in the areas of science, health sciences and engineering, of whom 515 (72%) were men and 198 (28%) were women. More specifically:

Science Departments: 125 men and 100 women.

Health Sciences Departments: 72 men and 42 women.

Engineering departments: 318 men and 56 women.

- 31 **in-depth interviews** with female teachers and researchers in the areas of science, health sciences and engineering





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# Main Results

1. ***Naturalization of Gender Differences:*** According to this construct, female teachers and researches would be accepting as natural a series of behaviors and attitudes traditionally attributed to the division between men and women, in which females are responsible for doing the housework and strive more to obtain academic achievements. This naturalization supposes that there is no questioning of the current gender order and this is due to the non-explicit mechanisms of discrimination to which they are confronted. However, when asked in private about their academic careers, this acceptance was questioned from a subjective reflection on their feelings and the challenges they faced.

2. **Implicit mechanisms of discrimination:** although these were not recognized as such initially in the survey, they were suggested in the in-depth interviews. Among these were: Implicit Bias, Stereotype Threat, Micro-messages/ Micro- aggressions



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What have you identified that needs to change in the models of programs, policies, processes or organizational structure that you are familiar with?





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# Implicit Bias

- Implicit biases may arise in the assessment of CVs and achievements of female professors when they apply for tenure.
- **How to counter these mechanisms? By demanding tenure committees to submit explicitly justified reports that support their decisions in the cases where they give tenure and where they don't.**





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# Stereotype Threat

Cases of stereotype threat may reduce the performance female students or female professors, for example, when defending a dissertation.

## How to counter this mechanism?

1. By demanding the presence of women in advisory committees.
2. Re-aiming against stereotype threat by explaining the *anxiety* caused by the situation without validating the stereotype and by affirming the importance and value of complex identities that have been systematically discriminated and/or underrepresented (Haslanger 2008).

stereotypes



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# Micro- Messages/ Micro-Aggressions

- It is important to acknowledge the potential hazards of micro-aggressions and how they affect the performance of female students and professors. For example: calling them *miss* instead of professor or director in official meetings, double-checking their work constantly, suggesting they got their positions by someone pulling strings and not by their own merit, etc.
- **How to counter these hazards?** By developing active bystander skills and raise awareness of how these micro-inequities and micro-aggressions work.





What concrete actions have you or your organization implemented that have produced positive change?





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# *EMULIES*

EMULIES, the Space for Women Leaders from Higher Education Institutions of the Americas, is a program of the Inter-American Organization for Higher Education (IOHE) that is hosted at the Pontifical Catholic University of Perú. Its strategic goals are:

1. Contribute to strengthen women's leadership and their participation decision-making at HEI.
2. Promote the construction of HEI increasing to be democratic, inclusive and socially responsible.
3. Provide thorough and updated information about women's situation at HEI.
4. Emphasis on higher education policies which favour gender equality



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# *EMULIES: Observatory and Data Repository*

**Promotes female leadership in the HEIs of the Americas, by:**

- Gathering leader women together: over 800 women since 2011 in different event where women exchange their common discriminatory situations and actions taken.
- Training and capacity building, with a Diploma of Gender and Leadership in HEI..
- Promotion of research and information systems, with an Observatory to have data of the situation of women in Universities where it is visible the differences of women in Science (only 12% of women are leaders in Engineering), and a data repository to exchange information regarding good practices, policies and information in general.





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# *Gender Equality Policies for Teaching*

- The Pontifical Catholic University of Perú approved in 2015— for the first time —the *Gender Equality Policies for Teaching* as an effort of the members of the Research Group on Gender Studies founded in 1997. None other university in the whole nation has policies that promote gender equality.
- They aim at promoting equal opportunities between male and female teachers in different academic units; eliminating discriminatory practices that affect career paths, academic participation and access to government, and women's well-being.
- And focus on promotion, research and management opportunities for women.



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# *Gender Equality Policies for Teaching*

- When an age is recommended to obtain tenure, the age of the female candidates will be reduced by 3 years for each child or for each person in their care (sick and elderly).
- When assessing or weighing merits, periods of departure or retirement due to maternity, care of children, elderly or sick relatives will not be taken into consideration.
- In cases of Academic Departments with a female teaching staff below 20%, calls will be made to women for full-time incorporation and ordination, until a distribution by sex is achieved that is related to the number of students and full-time teachers.



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# *Gender Equality Policies for Teaching*

- Academic discharge of up to six credits for full-time teachers with children up to 12 years of age, or if they are enrolled in a program to obtain master's or doctoral degrees and are in charge of an ascendant.
- Teachers who have children under the age of five will have preference in the choice of daytime schedules.





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# Implementation Problems

- The follow-up commission has no resources to act.
- The units that must implement the changes are resilient to the policies.
- Lack of commitment from the university authorities and, in many cases, even rejection.
- The university community has not internalized the policies, among other reasons, due to a lack of promotion and awareness.





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# *Regulation for the Prevention and Intervention in cases of Sexual Harassment*

- Approved in 2016 as part of the *Gender Equality Policies for Teaching*, also as an effort of the members of the Research Group on Gender Studies founded in 1997.
- They focus on prevention, principles of action and disciplinary procedures to ensure a safe environment for students and professors.





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# *Regulation for the Prevention and Intervention in cases of Sexual Harassment*

- Awareness-raising campaigns.
- Conduct surveys that address the issue of sexual harassment.
- Creation of a special commission to intervene in the face of sexual harassment. This commission will be responsible for receiving complaints, investigating and sanctioning sexual harassment in the first instance.





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# Implementation Problems

The **university law** only stipulates as a penalty for any form of sexual harassment the removal of tenure and expulsion from the university. Since the **university law** depends on the national law, it is very difficult to change it.

**SO? Minor infractions that do not comply with the gravity necessary for the penalty to be applied will prevail without any institutional penalty.**





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# Thank you!

[pruiz@pucp.edu.pe](mailto:pruiz@pucp.edu.pe)

<https://www.emulies-oui-iohe.org/>  
[emulies@oui-iohe.org](mailto:emulies@oui-iohe.org)

