Equity & Inclusion :
Ab ovo usque ad mala*

(Or - Soup to Nuts: How we create inclusive communities)

Sarah Tuttle
University of Washington, Seattle

*From the eggs to the apples
(just go with it)

During this talk, please feel free to manage your experience in the way that is best for you.

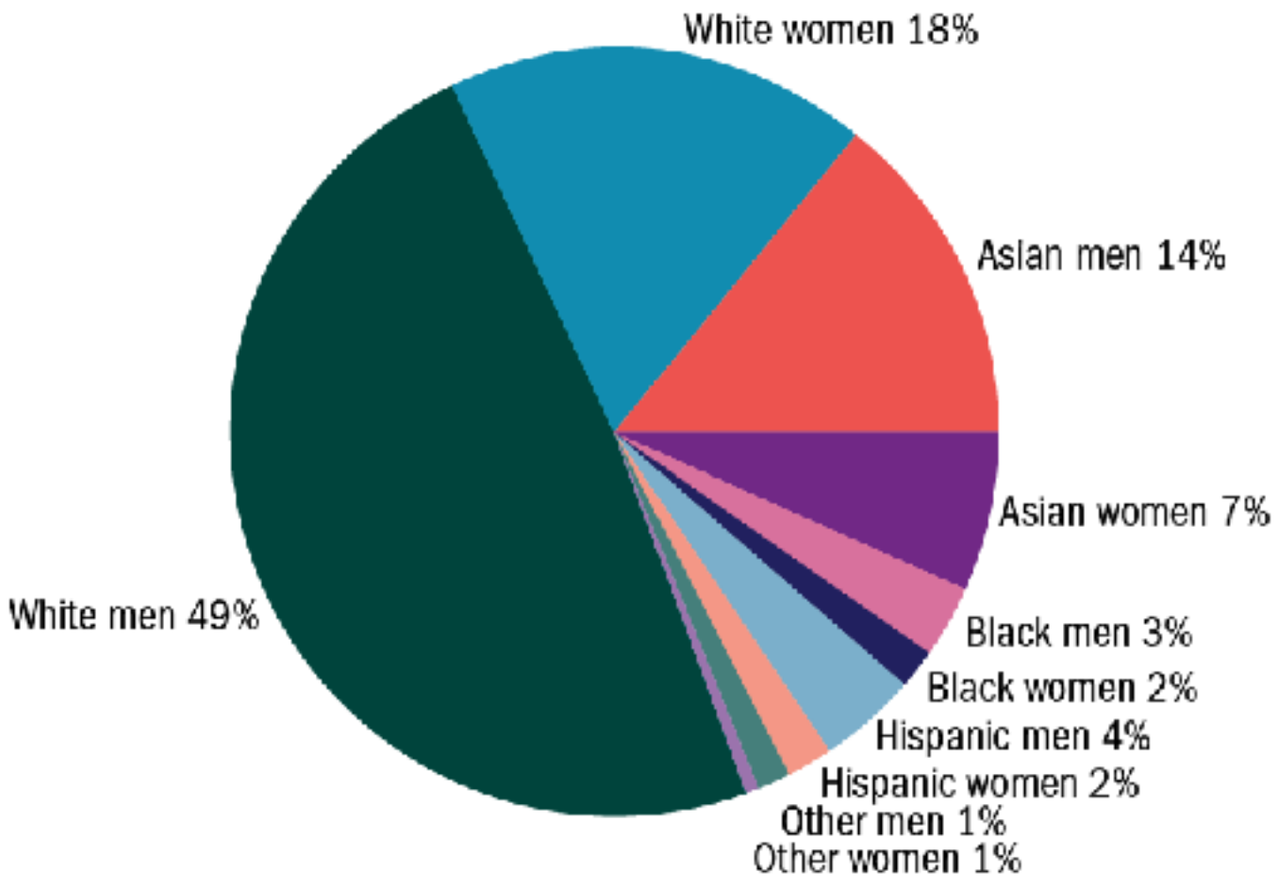
That might include:

- Taking pictures of the board
- Making audio/video recordings
- Using a laptop or other device
- Eating or drinking
- Standing or stretching
- Leaving the room for a period
- Stimming
- Sitting or laying on the floor
- etc.

THERE IS NO HUMANE WAY TO DETAIN FAMILIES

DETENTIONWATCHNETWORK.ORG

Scientists and engineers working in science and engineering occupations: 2015



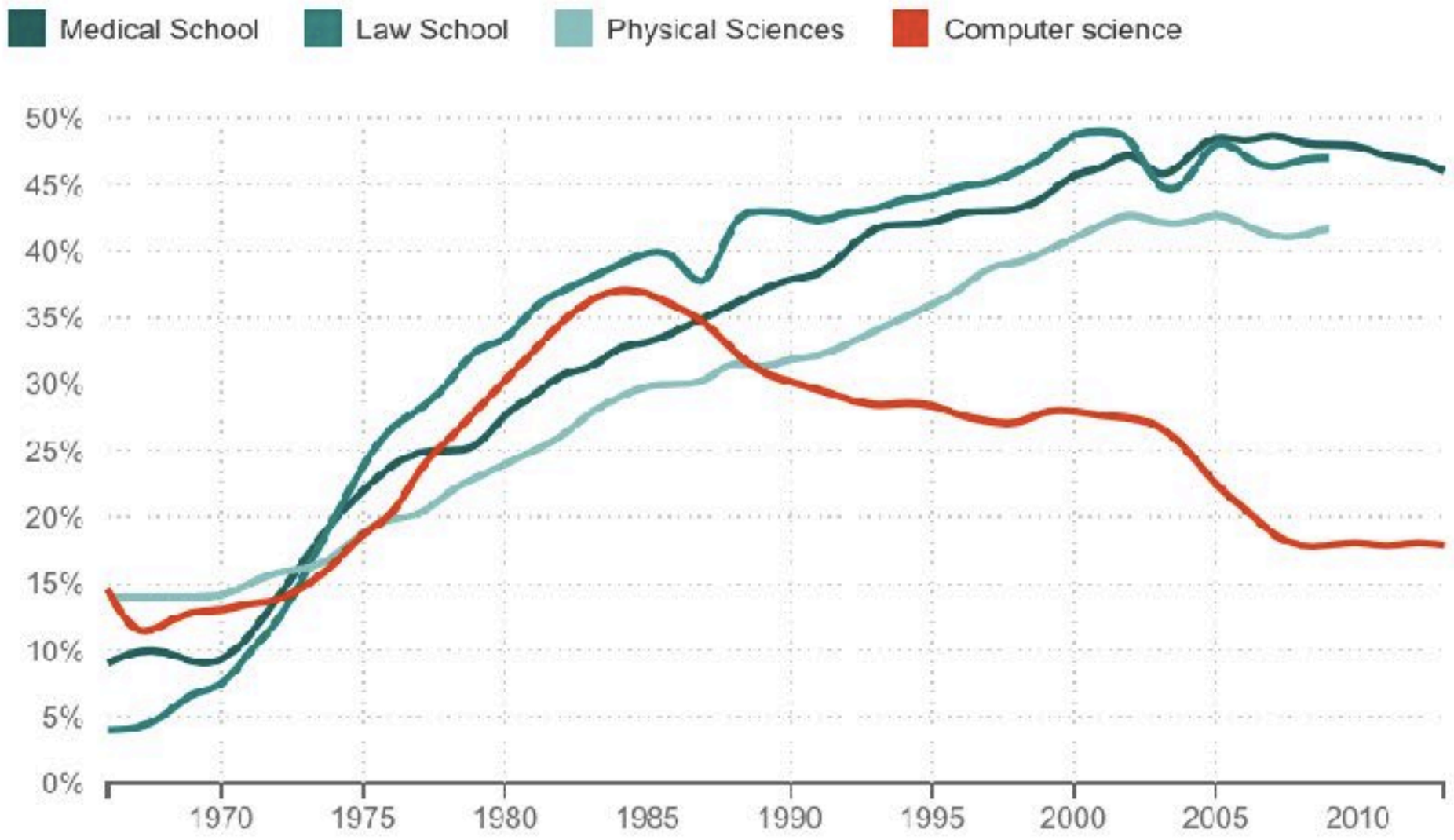
NOTES: Hispanic may be any race. Other includes American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and multiple race.

Women, Minorities, and Persons with Disabilities in Science and Engineering: 2017

Scientists and engi

What Happened To Women In Computer Science?

% Of Women Majors, By Field



NOTES: Hispanic may be ar

Women, Minorities, and P

Source: National Science Foundation, American Bar Association, American Association of Medical Colleges

Credit: Quoctrung Bui/NPR

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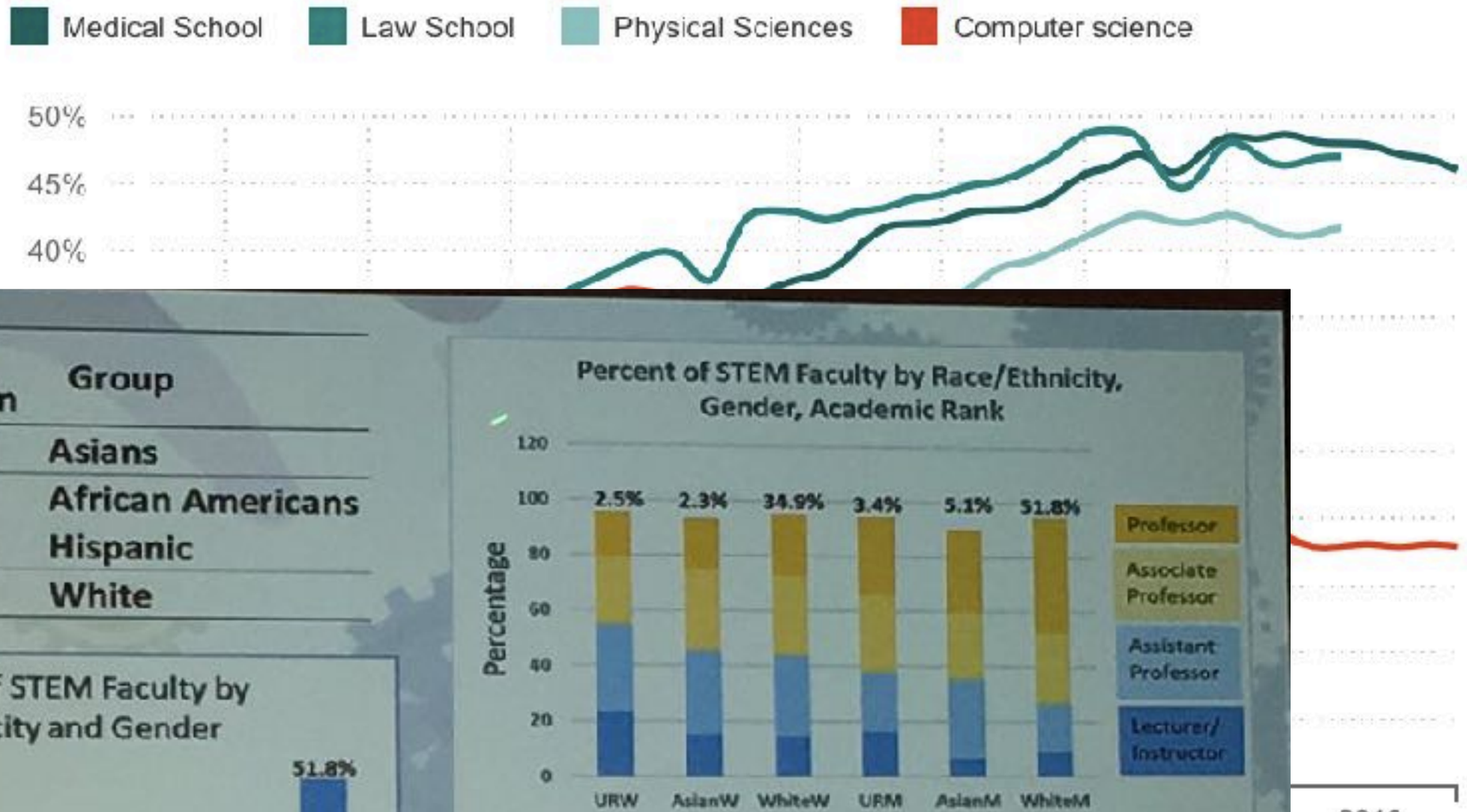
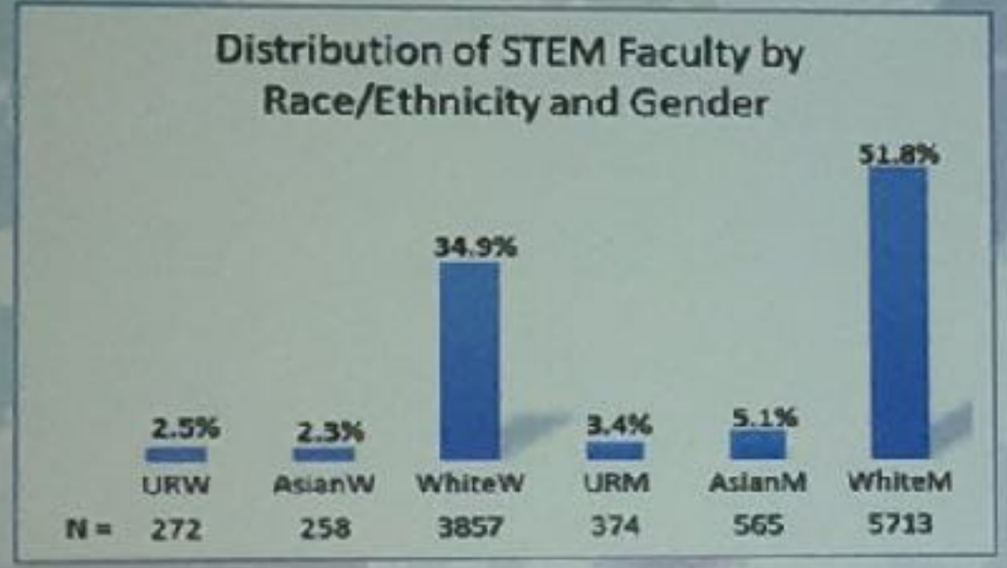


Scientists and engi

STEM Faculty	General Population	Group
7.40%	5.6%	Asians
5.90%	13.2%	African Americans
	16.3%	Hispanic
86.70%	63.7%	White



Adapted from Hurtado and Figuerosa in *Seeking Solutions: Maximizing American Talent by Advancing Women of Color in Academia. Summary of a Conference.* National Academies Press, 2013.

What Happened To Women In Computer Science?

% Of Wom

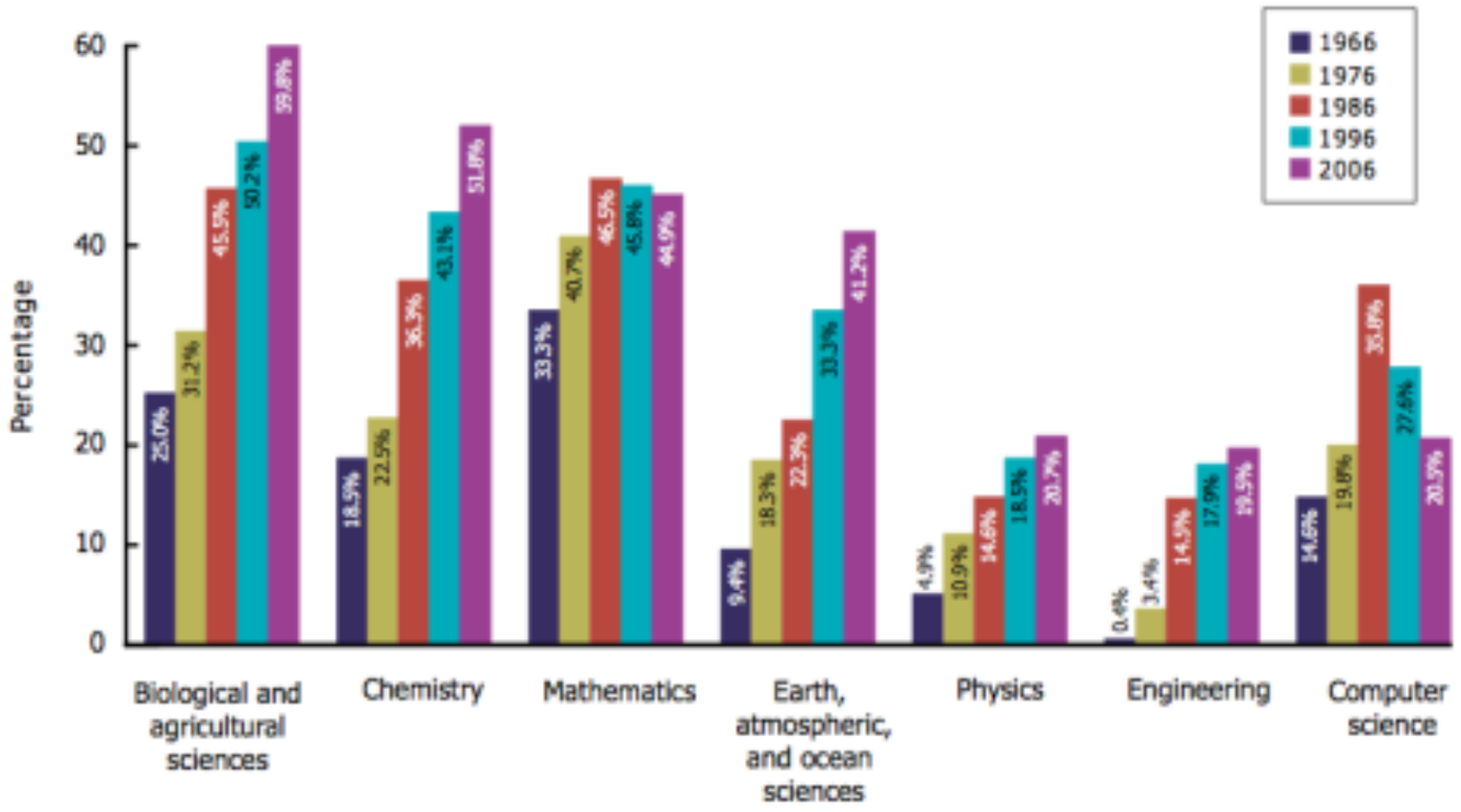
Medical

50%

45%

40%

Figure 6. Bachelor's Degrees Earned by Women in Selected Fields, 1966–2006



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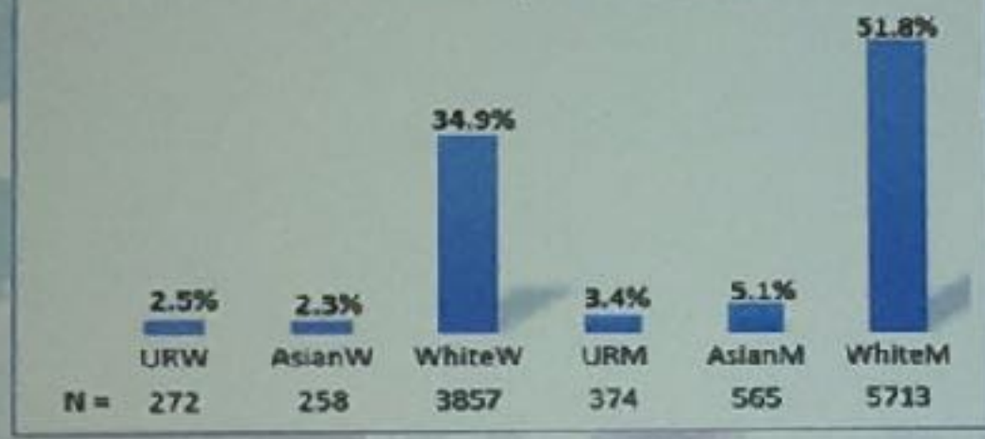
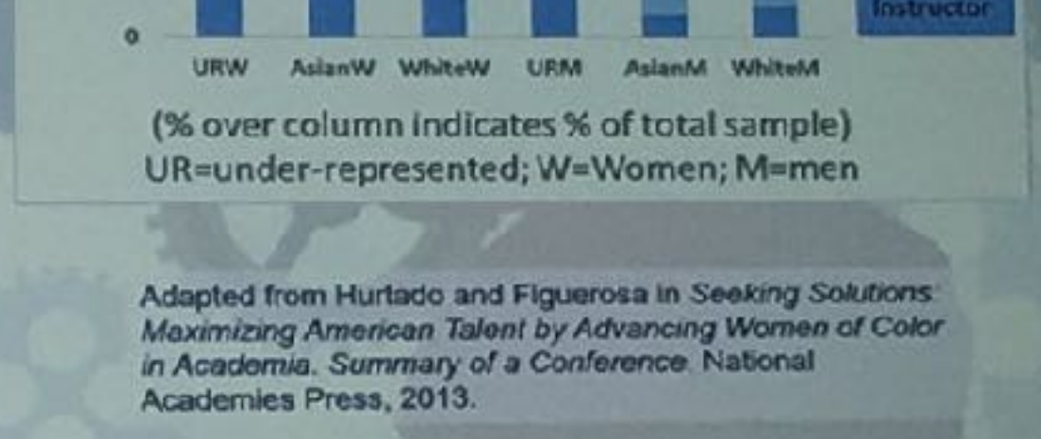
Distribution of STEM Facul
Race/Ethnicity and Gender





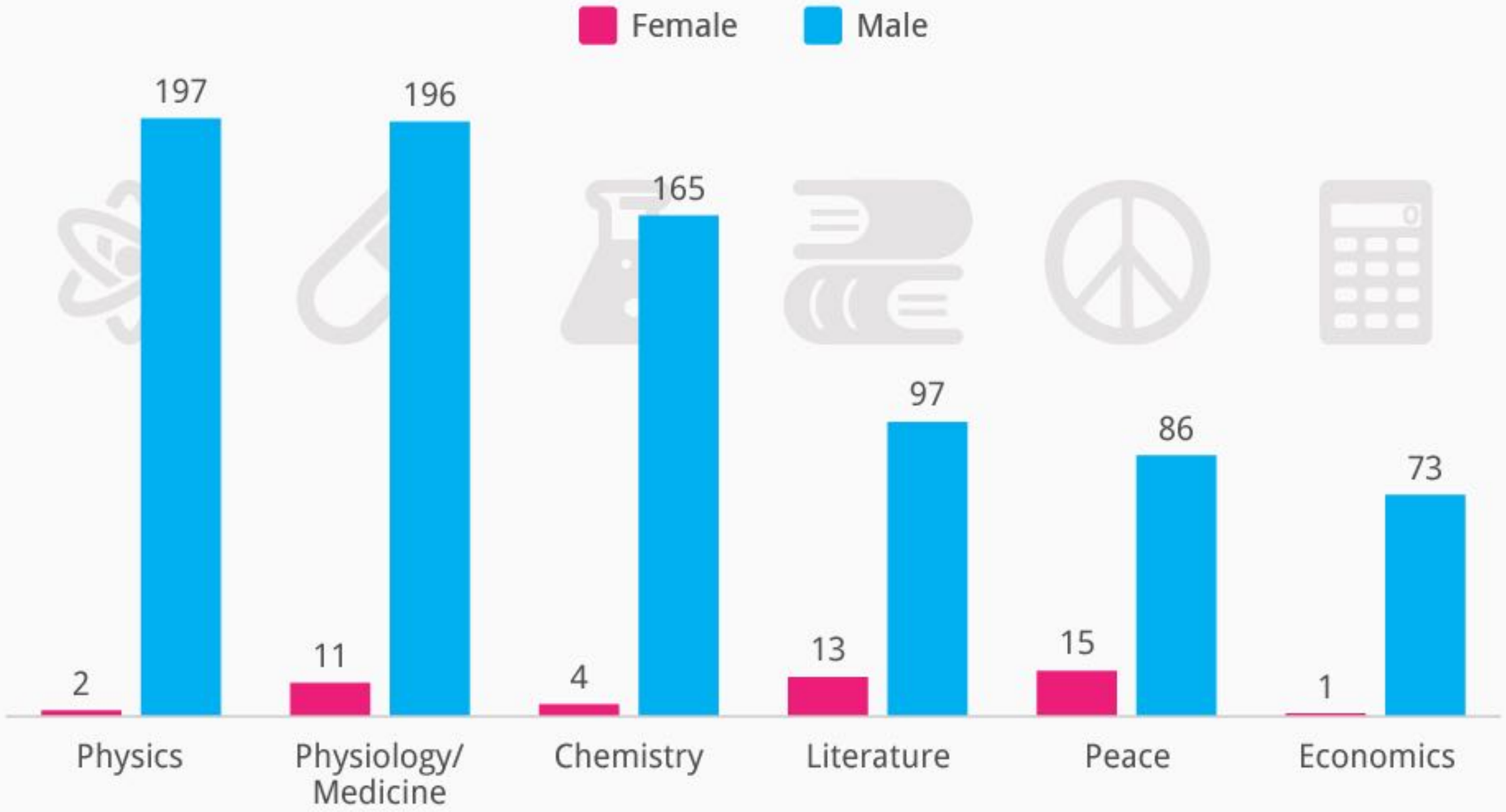
Adapted from Hurtado and Figuerosa in *Seeking Solutions: Maximizing American Talent by Advancing Women of Color in Academia. Summary of a Conference.* National Academies Press, 2013.

2010

eges

The Nobel Prize Gender Gap

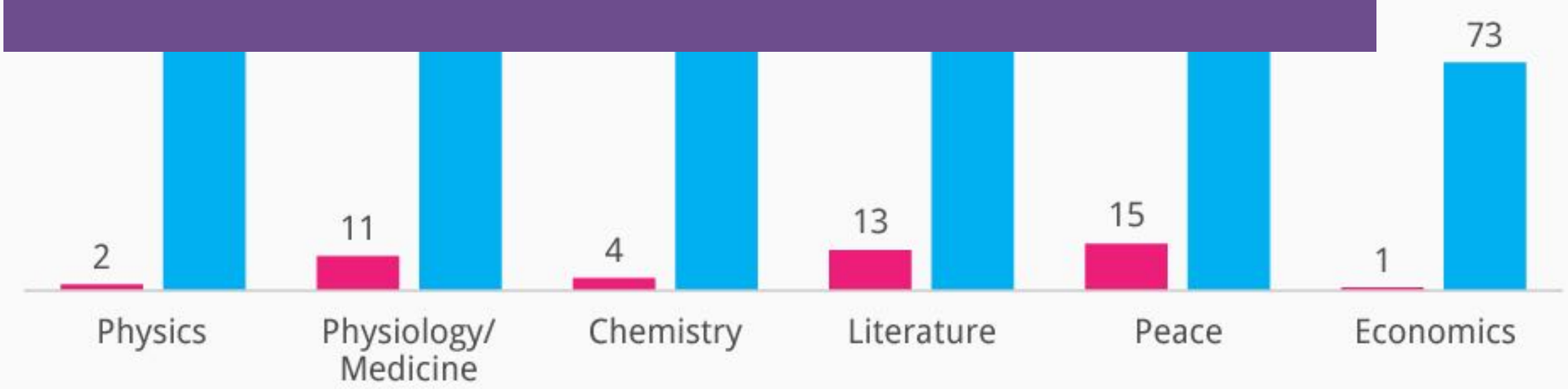
Nobel Prize winners since 1901 by category and gender (as of Oct. 8, 2014)



Source: Nobel Foundation

Mashable statista

- Unsolicited sexual touching by someone in a supervisory role (Pryor, LaVite, and Stoller 1993);
- Unsolicited touching from peers (Pryor 1987);
- Nonverbal dominance behaviors (Murphy, Driscoll, and Kelly 1999);
- Sending unsolicited pornographic materials electronically (Dall'Ara and Maass 1999; Maass et al. 2003);
- Sending sexist jokes electronically (Galdi, Maass, and Cadinu 2014);
- Sending sexual come-ons electronically (Diehl, Rees, and Bohner 2012);
- Asking sexist questions in an interview (Hitlan et al. 2009); and
- Sexualized behavior, such as staring at a woman's body, during an interview (Rudman and Borgida 1995).



Source: Nobel Foundation

Mashable statista

BENEFITS WHY?
GLOBAL DIVERSITY & INCLUSION

BENEFITS **WHY?**

GLOBAL DIVERSITY & INCLUSION

INCLUSIVE, RESPECTFUL WORKPLACE

ENSURE

INTELLEC CAPITAL

people win b

Diversity & Inclusion: Why It Matters

Inclusion influences employee engagement which in turn affects company performance.

Over a one-year period, companies with highly engaged employees enjoyed…

- 19% increase in operating income
- 28% increase in earnings per share

But for those with low engagement levels…

- 32% drop in operating income
- 11% drop in earnings per share

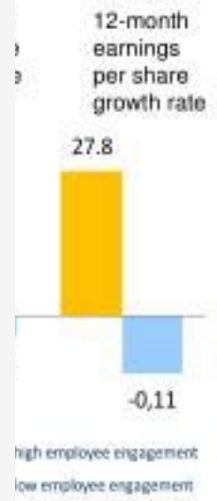
2007 Towers Perrin Global Workforce Study

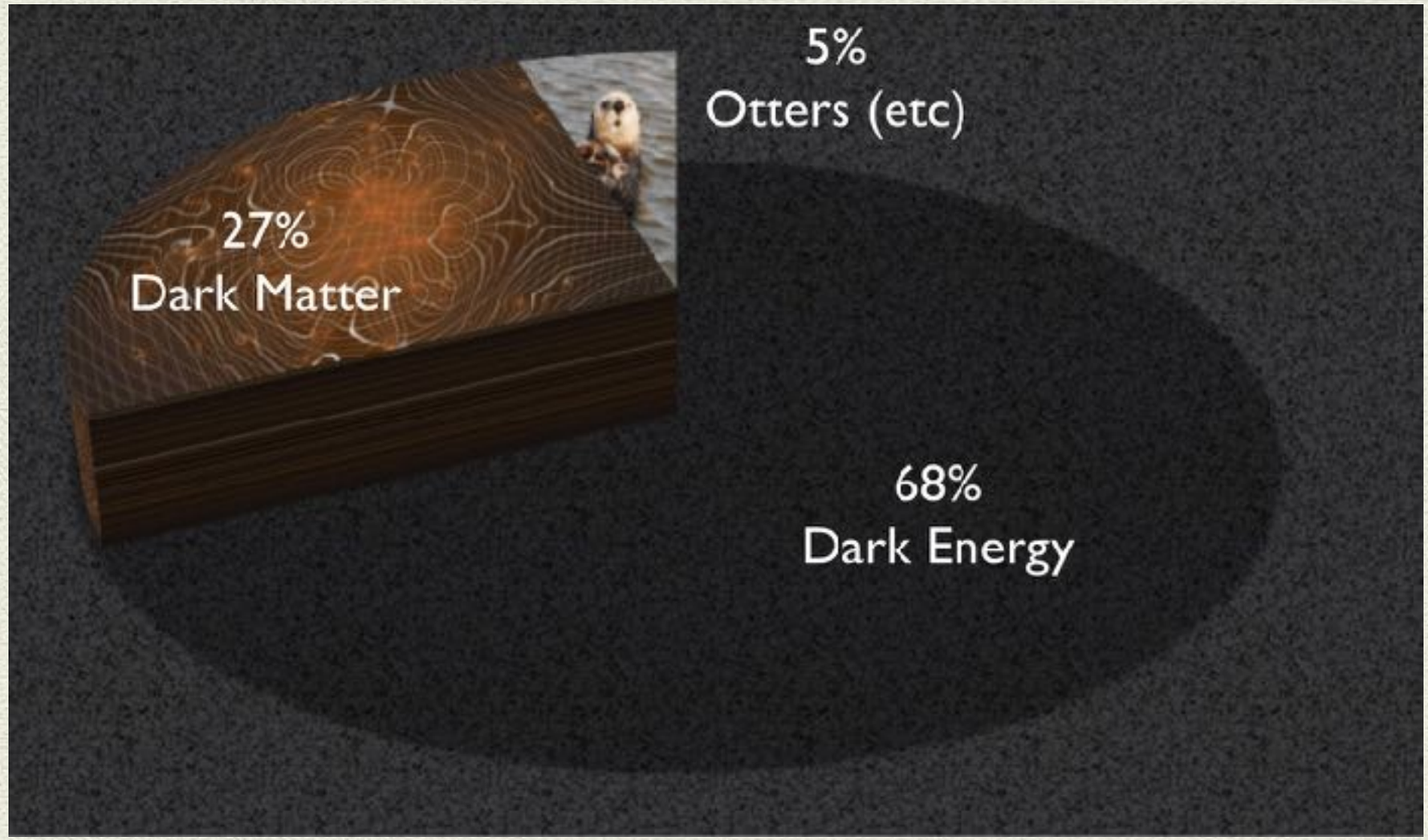
Is it any wonder why business leaders value D&I?

The Business Case: Why are Diversity and Inclusion beneficial to NASA?

The research literature on Diversity and Inclusion identifies factors that contribute to a competitive advantage.

1. **Better technical solutions and problem solving,**
2. **Stronger critical analysis,**
3. **Greater innovation and creativity,**
4. **Deeper understanding of and greater effectiveness in organizational communication patterns,**
5. **Higher levels of employee engagement, and**
6. **Cultural shift toward valuing fairness and respect for individual contributions,**




5%
Otters (etc)
27%
Dark Matter
68%
Dark Energy

Building a healthy physics community

"What if white male neutrality
wasn't presupposed?"

Lauren Chambers, "A Different Kind of Dark Energy:
Placing Race & Gender in Physics"
Yale Bachelor of Science Thesis, 2017

"Research also shows that, by far, the greatest predictor of the occurrence of sexual harassment is the organizational climate in a school, department, or program, or across an institution."

Institutional Racism

"Institutional racism is distinguished from racial bigotry by the existence of institutional systemic policies, practices and economic and political structures which place minority racial and ethnic groups at a disadvantage in relation to an institution's racial or ethnic majority."

Wikipedia, "Institutional Racism"

developed by Stokely Carmichael and Charles V. Hamilton in the 60s

Intersectional Feminism: An applied framework for Physics

PI: Chanda Prescod-Weinstein

People of color are 37% of the US population (2013)

<u>Astronomers (2014)</u>

2.1% Black/African American

3.2% Latin@(Latinx)/Hispanic/Spanish origin

African American astronomy faculty in US: 7

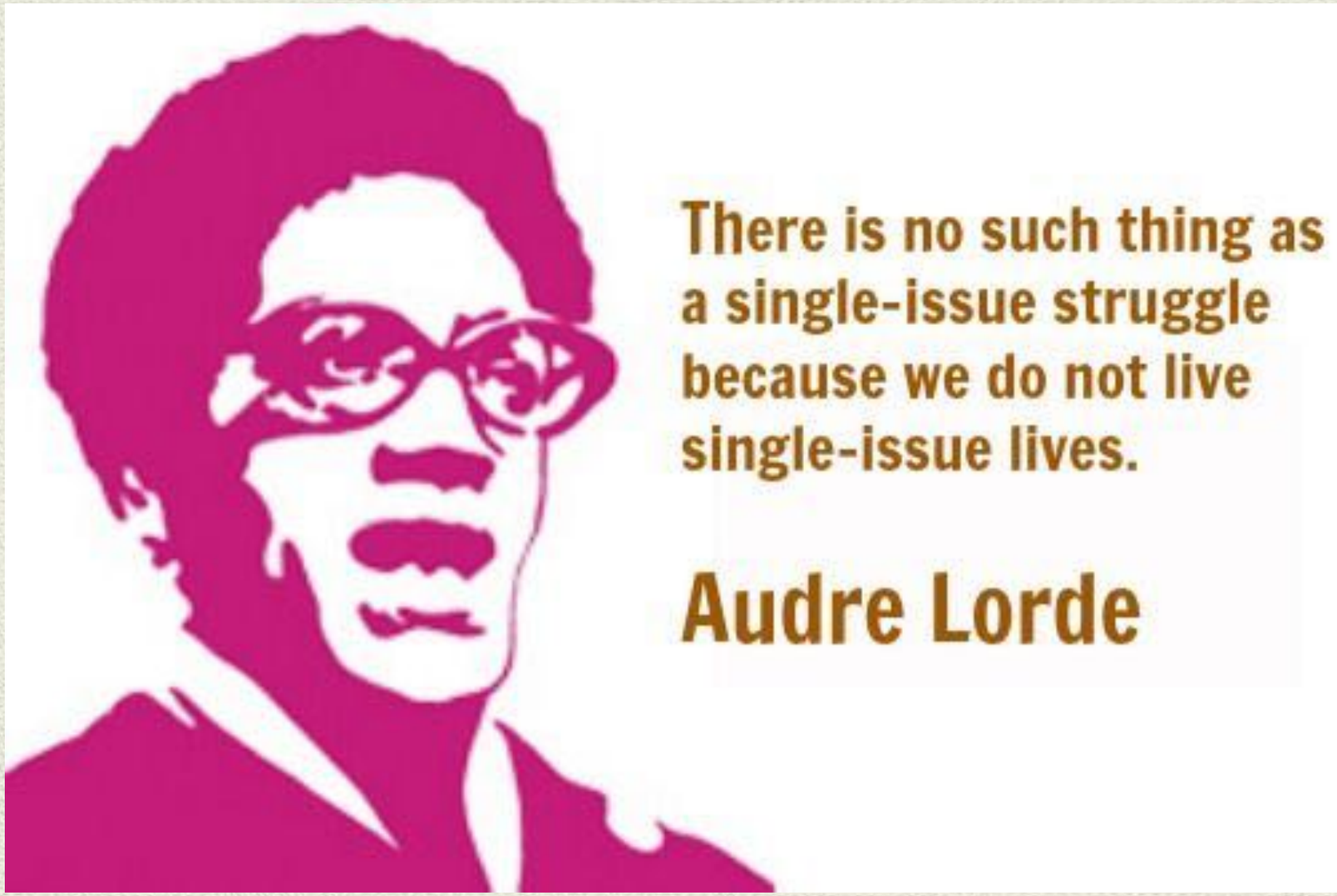
Hispanic astronomy faculty in US: 4.

No university has both.

Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color

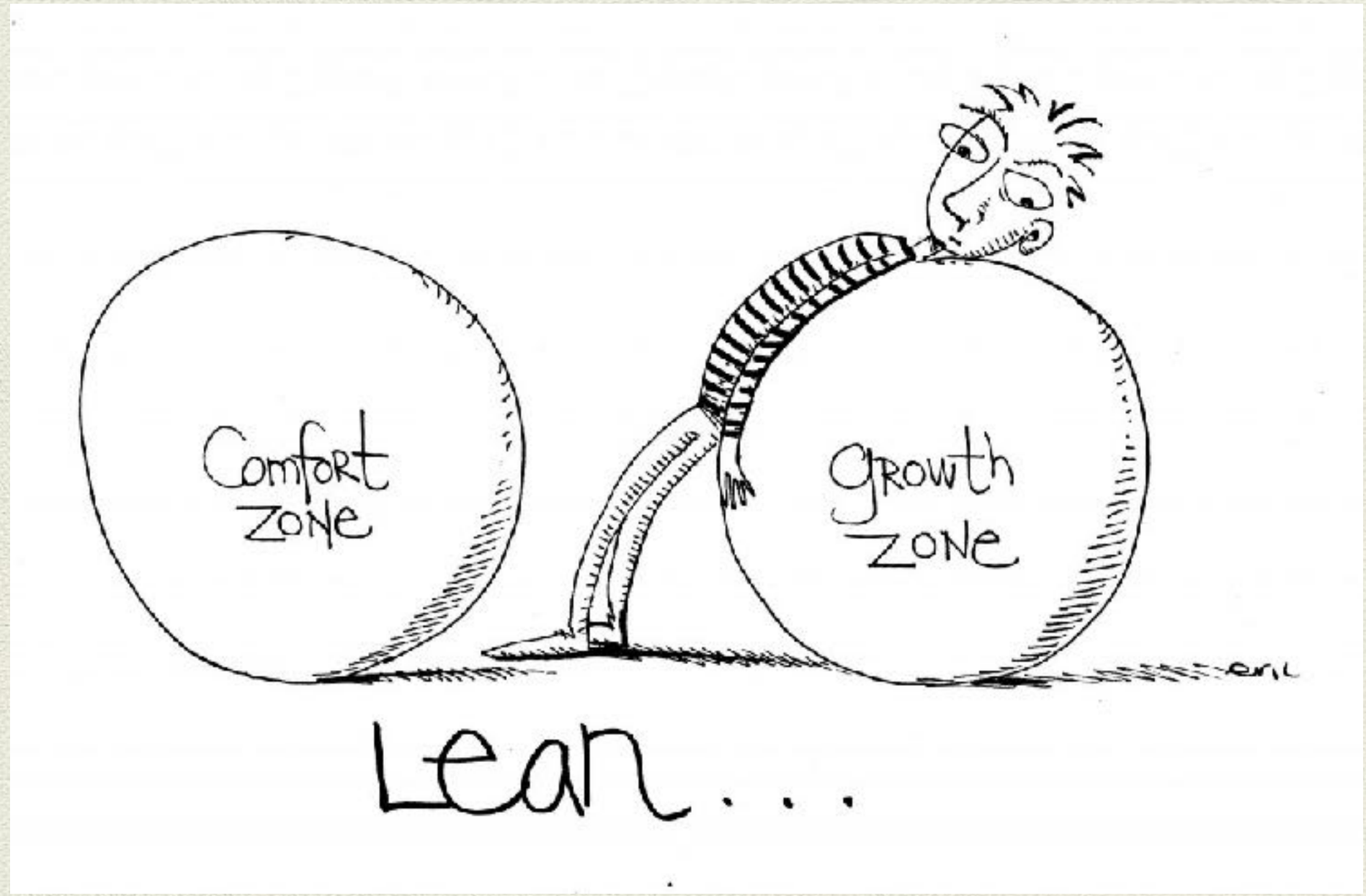
Kimberlé Crenshaw
Stanford Law Review
Vol. 43, No. 6 (Jul.,1991), pp. 1241-1299

Marilyn Frye



1. **Academic science, engineering, and medicine exhibit at least four characteristics that create higher levels of risk for sexual harassment to occur:**
   a. **Male-dominated environment**, with men in positions of power and authority.
   b. **Organizational tolerance for sexually harassing behavior** (e.g., failing to take complaints seriously, failing to sanction perpetrators, or failing to protect complainants from retaliation).
   c. **Hierarchical and dependent relationships between faculty and their trainees** (e.g., students, postdoctoral fellows, residents).
   d. **Isolating environments** (e.g., labs, field sites, and hospitals) in which faculty and trainees spend considerable time.

Sexual harassment has adverse effects that not only affect the targets of harassment but also bystanders, coworkers, workgroups, and entire organizations.


Comfort zone
Growth zone
Lean...

How To Solve a Problem

- 1. Understand the Problem
  Read the problem. Understand it. Identify the knowns, the unknowns and the goal.
- 2. Devise a Plan
  Find the connections. Choose the appropriate strategy. Devise a plan to solve the problem.
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  Execute your plan. Create a solution. If it does not work- discard it, and choose another.
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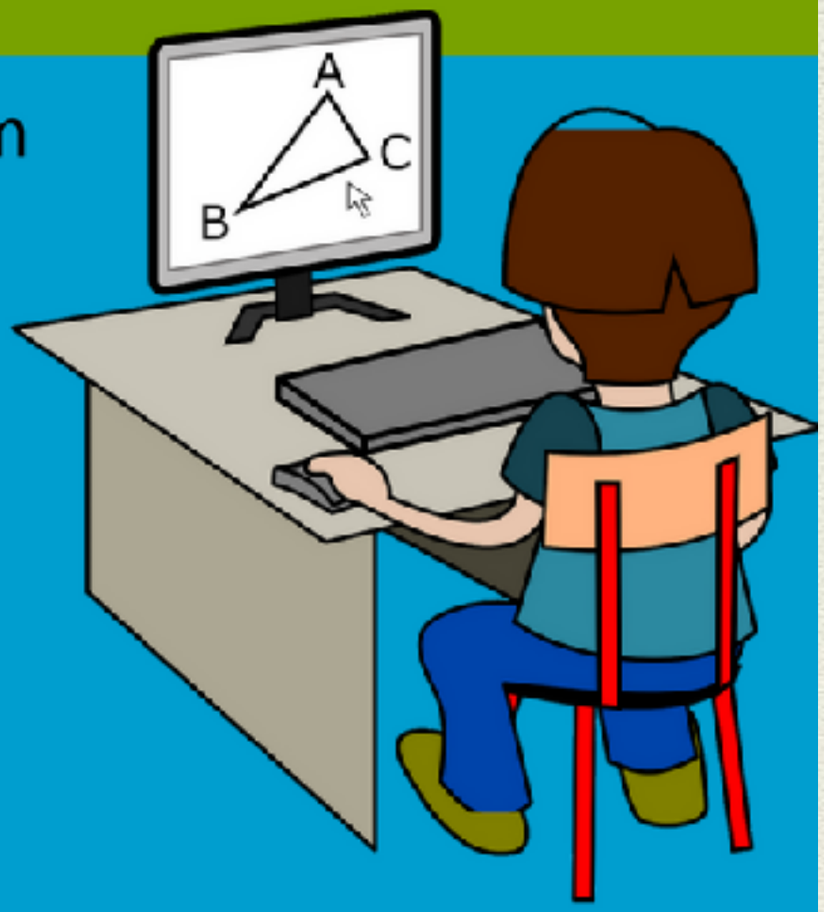
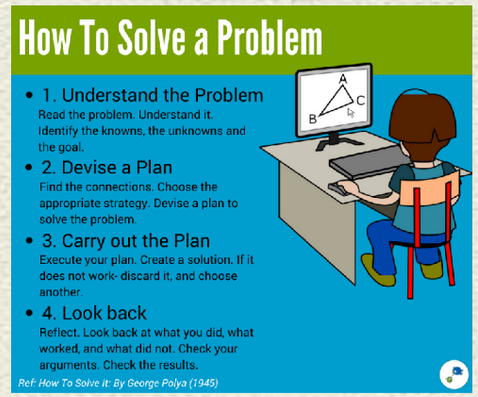


Ref: How To Solve It: By George Polya (1945)

"You are not objective. You are not more objective than other people. You are especially not more objective about issues of marginalization than people who are marginalized relative to you."

Chanda Prescod-Weinstein

Understand the Problem



LGBT Climate in Physics

BUILDING AN INCLUSIVE COMMUNITY

“At my university, coworkers made snide/hostile remarks about my wardrobe such as ‘Why do you paint your nails? You’re a boy. Boys don’t do that.”

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"In the last lab I worked with, I was afraid to even mention that I might be gay. They were all very traditional sort of people."

"Because I am in the closet about my identity, and I pass just fine as a result, I am actually quite comfortable in these areas. What people don't know can't hurt me!"

"I don't know of any other 'out' physics grad students. I know that a lot of them are very conservative. And I feel like they respect me right now. But I don't know that they would respect me if I came out to them."

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"I think I grappled more with the race element than I do with the sexuality because the deal is - is that that's what they see first. I can't actually closet my race because I'm - evidently I'm brown - my hair looks so different, so it's just there. That said, I think there's already a prejudgement there on the basis of how high my aptitude is, just in general. It doesn't necessarily have to be specific to physics but anything that requires some level of critical thinking is always kind of under examination or assumed to be mediocre or subpar."

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"…And the outlook for me in terms of getting a PhD…is really contingent upon whether or not I have the right type of support system around me to be able to facilitate my success."

Recommendations

1. Ensure a safe and welcoming environment at APS meetings
2. Address the need to systematically accommodate names changes in publication record.
3. Develop advocacy efforts that support LGBT equity & inclusion.
4. Promote LGBT-inclusive practices in academia, national labs, & industry.
5. Implement LGBT-inclusive mentoring programs
6. Support the establishment of a Forum on Diversity & Inclusion

LGBT physicists reported trouble identifying allies to help mitigate isolation, exclusion, or marginalization.

"…And the outlook for me in terms of getting a PhD…is really contingent upon whether or not I have the right type of support system around me to be able to facilitate my success."

Join SPECTRUM LRG
to celebrate

PRIDE month

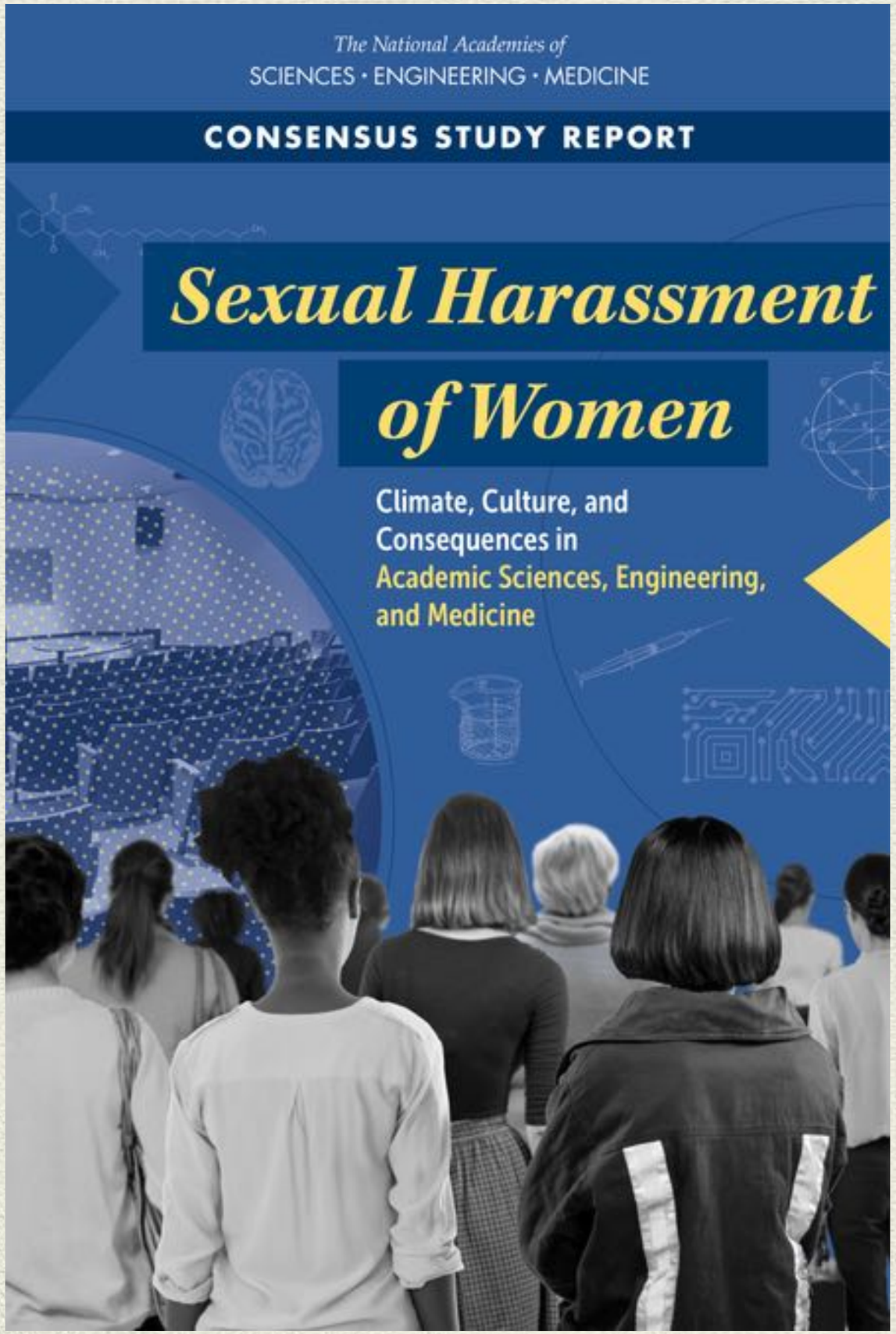
When: June 22, 2018

Where: Fiammé Pizzeria

Contact: Valery Stanley

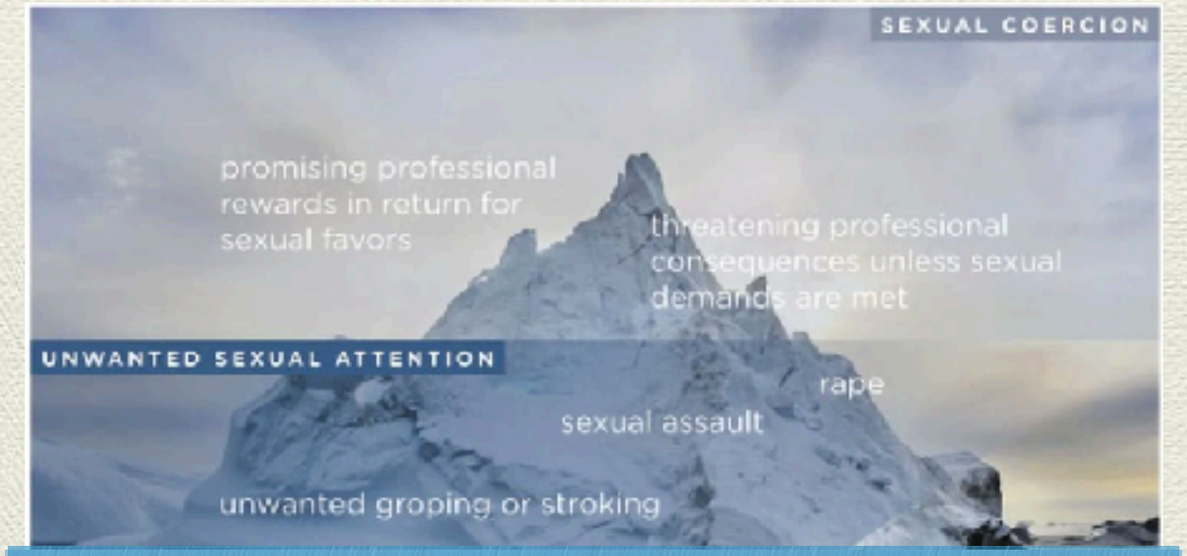
vstanley@fnal.gov or ext. 3933

Fermilab
SPECTRUM



Published on June 12th, 2018


SEXUAL COERCION
promising professional rewards in return for sexual favors
threatening professional consequences unless sexual demands are met


SEXUAL COERCION
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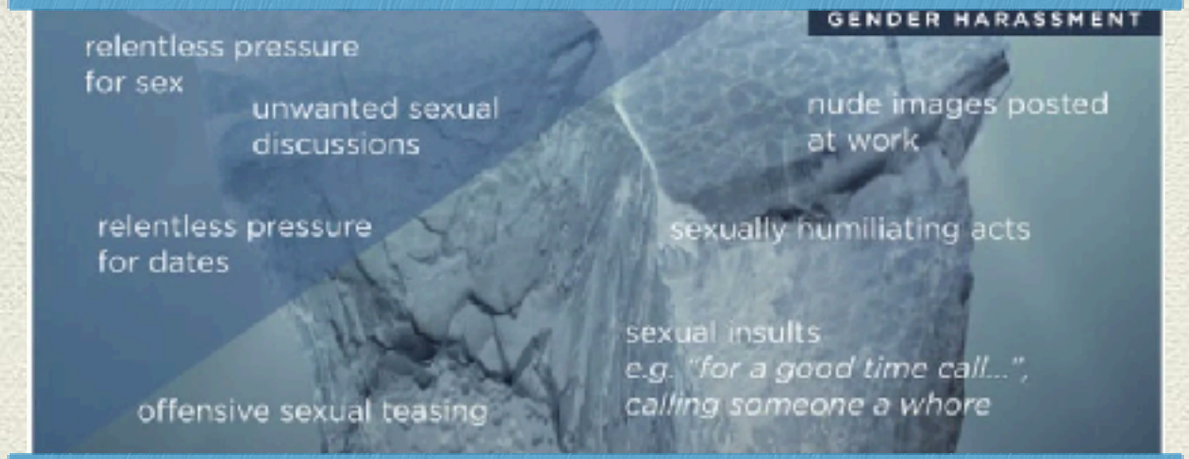
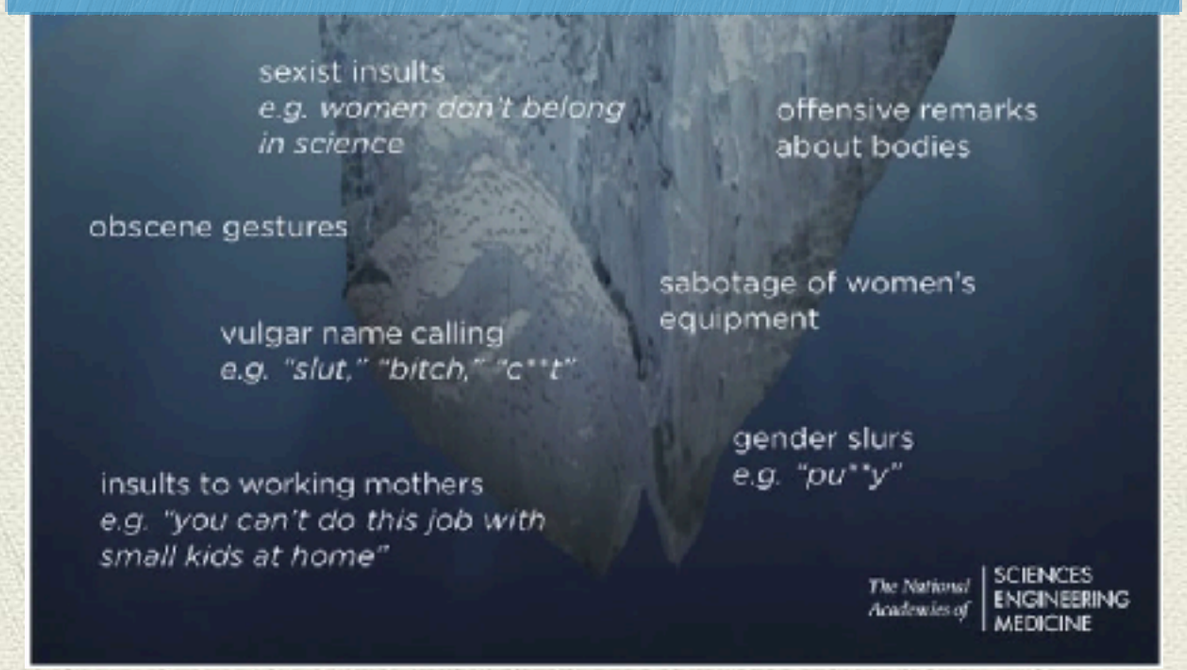
threatening professional consequences unless sexual demands are met
UNWANTED SEXUAL ATTENTION
rape
sexual assault
unwanted groping or stroking


GENDER HARASSMENT
relentless pressure for sex
unwanted sexual discussions
nude images posted at work
relentless pressure for dates
sexually humiliating acts
sexual insults
e.g. "for a good time call...", calling someone a whore
offensive sexual teasing


sexist insults
e.g. women don't belong in science
offensive remarks about bodies
obscene gestures
sabotage of women's equipment
vulgar name calling
e.g. "slut," "bitch," "c**t"
gender slurs
e.g. "pu**y"
insults to working mothers
e.g. "you can't do this job with small kids at home"
The National Academies of
SCIENCES
ENGINEERING
MEDICINE


SEXUAL COERCION
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UNWANTED SEXUAL ATTENTION
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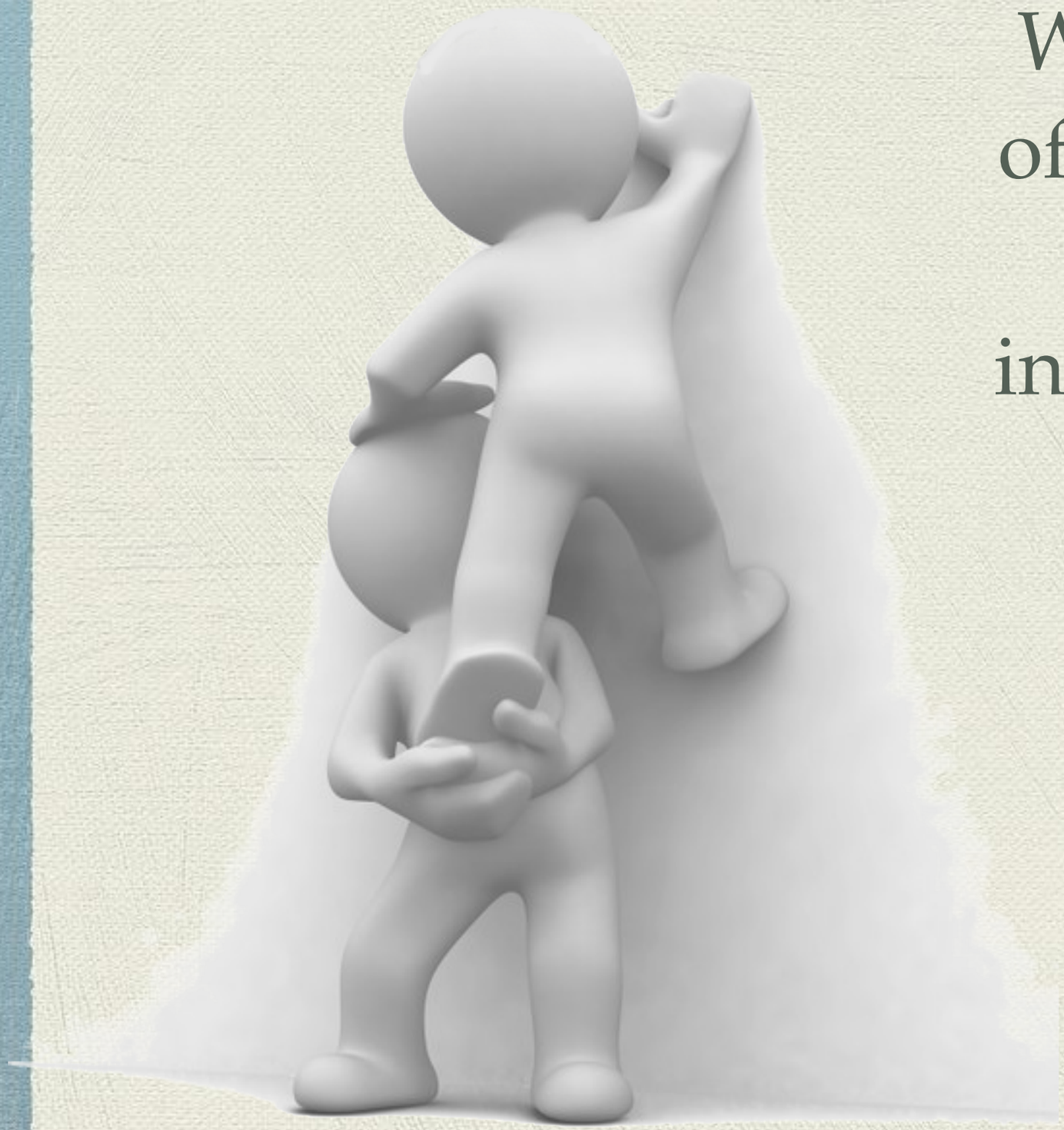
The National Academies of
SCIENCES
ENGINEERING
MEDICINE


community
connection
contribution
creativity
ingenuity
hypothesis
IMAGINATION
INDEPENDENCE
INTERDEPENDENCE
empathy
multiple perspectives
reflection
analysis
evidence
observation
proof
MINDFULNESS
impulse control
flexibility
risk taking
self awareness
communication
VOICE
curiosity
perplexity
unanswered questions
INQUIRY

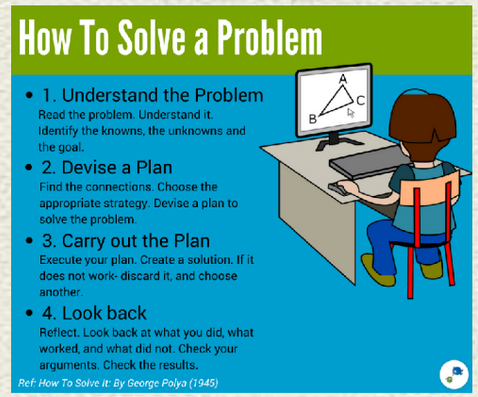


Write down the name of one or two scientific mentors who have influenced your career.

Write down the name of one or two scientific mentees whose careers you have supported over several stages.

Write down the name of someone you know who has left the field on less than optimal/independent terms.

Devise a Plan



Outreach is great…

But it isn't the sole core of inclusion work. We've been doing lots of recruiting. But what happens when they actually join our fields?

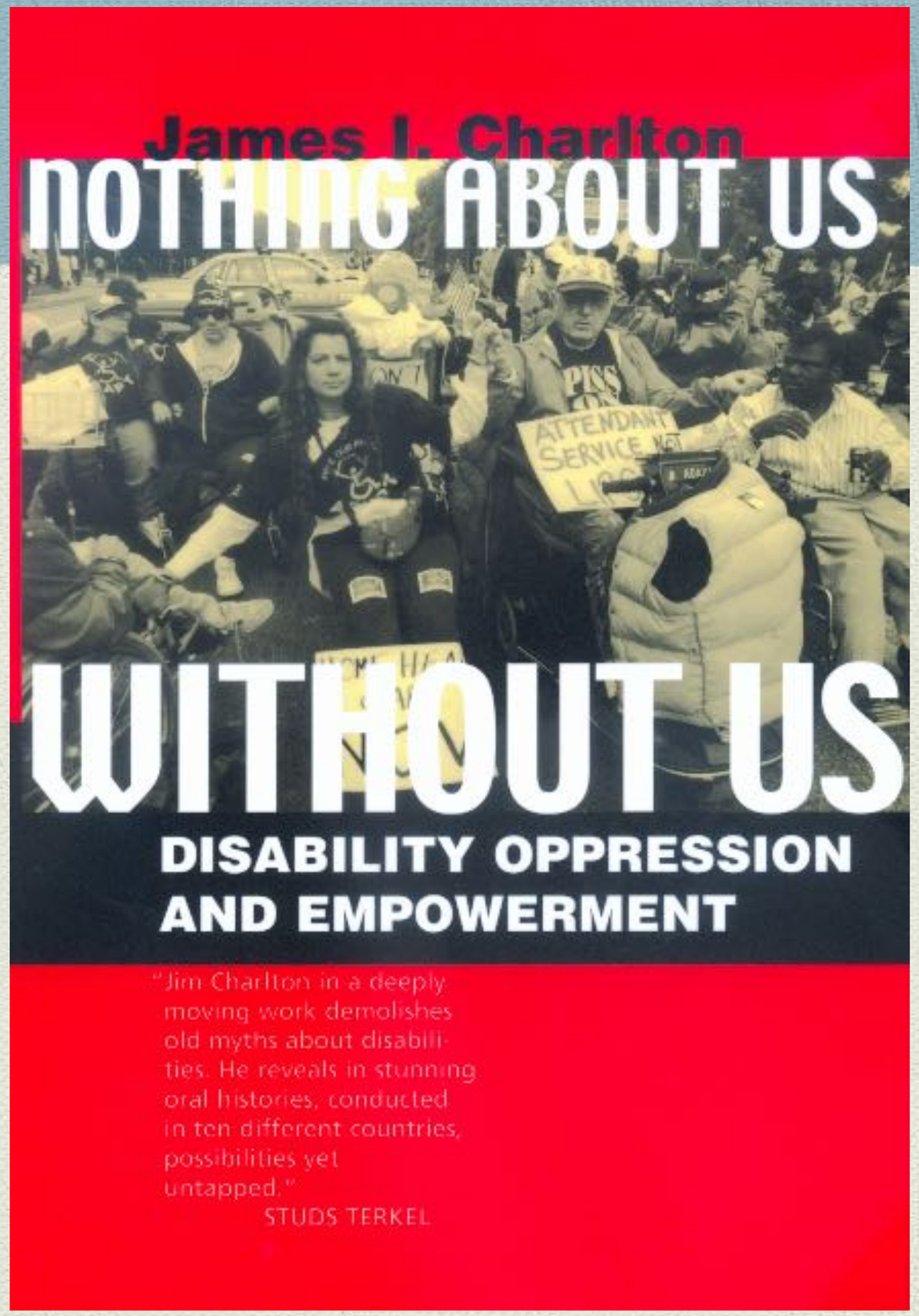
> We have all these K–12 STEM efforts. Let's get the girls excited about science. And at this point, a lot of us feel like, why? Why would you do that to them? They're gonna go to school and they're gonna fall in love with science and then they're gonna be 30 and they're gonna be fending off advances from some 55-year-old man and questioning every decision that they made in their lives. Why would you encourage them to do that? So, I focus most of my efforts now on women who are already in the field. I would love to spend lots of time with kids and get them excited about science, but I'm not that excited about science anymore. (*Assistant professor in geosciences*)

Overview of Actions

- Removing Barriers to Access
- Creating Inclusive Environments
- Inclusion and Access to Power, Policy, and Leadership
- Establishing a Community of Inclusive Practice

But first…

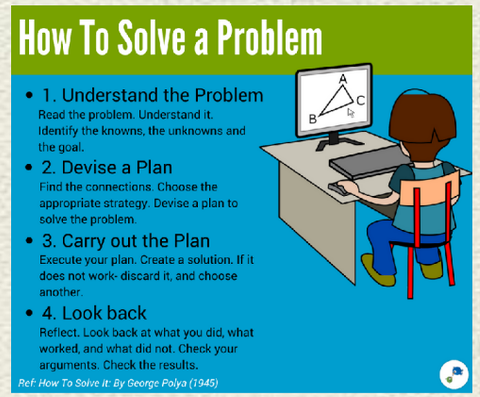

Nothing about us
without us

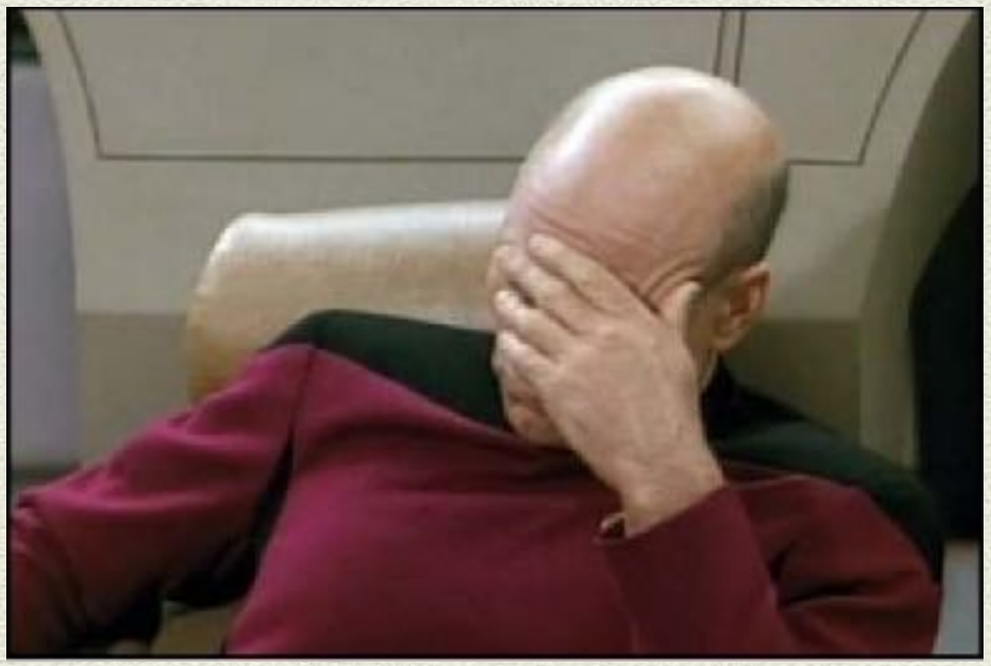

James I. Charlton
NOTHING ABOUT US
WITHOUT US
DISABILITY OPPRESSION
AND EMPOWERMENT
"Jim Charlton in a deeply moving work demolishes old myths about disabilities. He reveals in stunning oral histories, conducted in ten different countries, possibilities yet untapped."
STUDS TERKEL

What is the climate at Fermilab? In your group? In your subfield?

- Actions speak louder than words
- Allyship is not a title to be earned, but actions taken.
- Remember power dynamics.
- Spend your social/institutional capital to support minoritized colleagues.
- Step outside your experience.
- Treat mentorship relationships as a two way street - your mentee is not the only one who is learning.

Carry out the Plan





You will screw up.

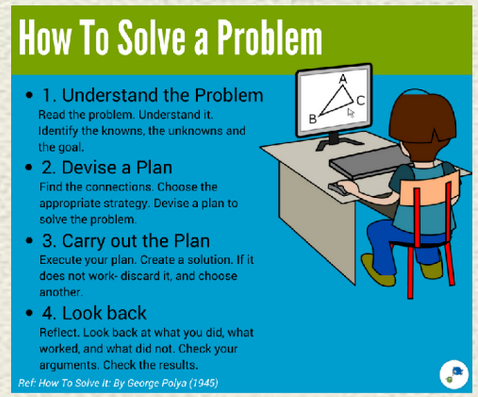
Probably a lot.

Embrace it.

Apologize.

Learn.

Look Back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Reflect. Look back at what you did, what worked, and what did not. Check your arguments. Check the results.
Ref: How To Solve it: By George Polya (1945)
A
B
C


community
connection
contribution
creativity
ingenuity
hypothesis
IMAGINATION
INDEPENDENCE
INTERDEPENDENCE
empathy
multiple perspectives
reflection
analysis
evidence
observation
proof
MINDFULNESS
impulse control
flexibility
risk taking
self awareness
communication
VOICE
curiosity
perplexity
unanswered questions
INQUIRY

Summary

1. In many physics environments, social norms established expectations of closeted behavior.
2. A significant fraction of LGBT physicists have experienced or observed exclusionary behavior.
3. LGBT physicists with additional marginalized identities faced greater levels of discrimination.
4. Transgender and gender-nonconforming physicists encountered the most hostile environments.
5. Many LGBT physicists were at risk for leaving their workplace or school.
6. LGBT physicists reported trouble identifying allies to help mitigate isolation, exclusion, or marginalization.

Stop prioritizing your comfort over the thriving & surviving of others.