



One step forward, two steps back: the frustration of diversity efforts in STEM

 @LorenaABarba

About me

- ▶ Associate Professor of Mechanical and Aerospace Engineering, George Washington University, Washington DC
- ▶ **Member of the Board of Directors, NumFOCUS** (since 2015)
- ▶ Associate Editor-in-Chief, Journal of Open Source Software
- ▶ Champion for OS Software in research and education



<http://lorenabarba.com>

About me

- ▶ Parallel Lives: Women in GPU Computing, May 8, 2014, NVIDIA Blogs
- ▶ *“I won’t go to your conference because the plenary speakers are all men,”* Medium, Oct. 10, 2015
- ▶ *“How I get gender balance in tech-conference committees,”* Medium, June 18, 2017
- ▶ *“Bias, Diversity, Backlash, Manifestos, and Rebuttals,”* Medium, July 12, 2018

Exclusive: Here's The Full 10-Page Anti-Diversity Screed Circulating Internally at Google [Updated]



Kate Conger
8/05/17 4:30pm



4.0M



4.6K



74



A software engineer's 10-page screed against Google's diversity initiatives is going viral inside the company, being shared on an internal meme network and Google+. The document's existence was first reported by [Motherboard](#), and Gizmodo has obtained it in full.

OPINION

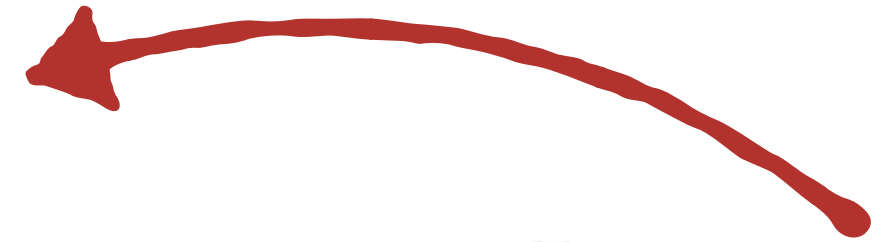
No, the Google manifesto isn't sexist or anti-diversity. It's science

DEBRA SOH

CONTRIBUTED TO THE GLOBE AND MAIL

PUBLISHED AUGUST 8, 2017

In mice



As well, new research from the field of genetics shows that testosterone alters the programming of neural stem cells, leading to sex differences in the brain even before it's finished developing in utero. This further suggests that our interests are influenced strongly by biology, as opposed to being learned or socially constructed.

??



DIVERSITY, SCIENCE / TECH, TOP 10 OF 2018

Published on June 19, 2018

Why Women Don't Code

written by **Stuart Reges**

"they don't
want to..."

Free-choice explanation and biological differences

- ▶ Counterexample: rapid de-segregation of occupations
 - women graduates of medical school: 16% in 1975 ... 40% in 1995
- ▶ People's interests and choices are not innate
 - experience, economic opportunities, social expectations, parental guidance, cultural pressures...

7,985

Views

1,035

CrossRef citations
to date

19

Altmetric

Original Articles

The Four-Phase Model of Interest Development

Suzanne Hidi & K. Ann Renninger

Pages 111-127 | Published online: 08 Jun 2010

Download citation

https://doi.org/10.1207/s15326985ep4102_4

...the culture of a learning community is what determines people's interest in joining it

Occupational sex segregation

- ▶ Turn of the 20th Century: <1 in 5 women worked for wages; 1940: 27% of women 16+ worked for wages
1986: 55% ... 57% in 2017
- ▶ Always segregated by occupation: levels of segregation steady between 1900 and 1970, then decrease
- ▶ Women in the labor force as a whole: 38% in 1970, 43% in 1980

Ref.: “Job Queues, Gender Queues,” P.A. Barbara, R. Reskin (1990)

Occupational gender segregation is one of the leading factors in the wage gap, and therefore desegregating high-paying, high-demand occupations is a social-justice concern.

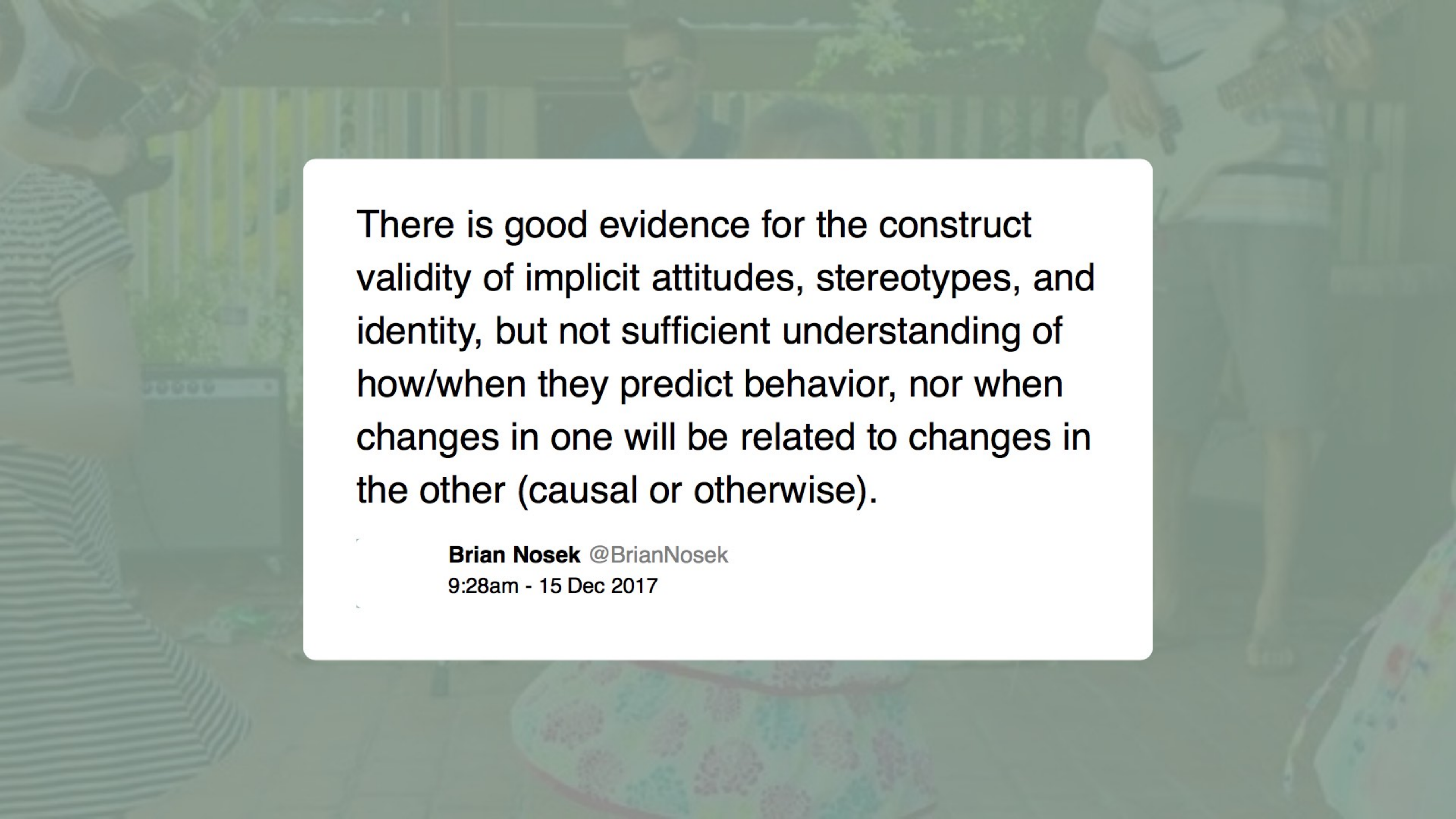


Why diversity matters

January 2015 | Article

By [Vivian Hunt](#), Dennis Layton, and [Sara Prince](#)





There is good evidence for the construct validity of implicit attitudes, stereotypes, and identity, but not sufficient understanding of how/when they predict behavior, nor when changes in one will be related to changes in the other (causal or otherwise).

Brian Nosek @BrianNosek

9:28am - 15 Dec 2017

Most trainings have not been systematically evaluated (a few exceptions); the available evidence suggests that they can change awareness of bias & motivation to address, but not the actual behavior. See, e.g, [@JenniferJoyGaba](#)'s dissertation from my lab. thesiscommons.org/vpd8b/



Brian Nosek @BrianNosek

9:31am - 15 Dec 2017

[@JenniferJoyGaba](#) Finally, there is evidence more generally that training is not particularly effective at addressing bias in institutions. See, for example, Kalev and Dobbin's research e.g.

journals.sagepub.com/doi/abs/10.117...

Effective solutions address structural problems and policies as [@hardsci](#) suggested.



Brian Nosek @BrianNosek

9:33am - 15 Dec 2017



ABOUT AWAKEN | VISIT OUR WEBSITE

How to Not Suck at Unconscious Bias Training



Michelle Kim

[Follow](#)

Dec 4, 2017 · 9 min read

So your company decided to jump on the unconscious bias training bandwagon. Maybe this is your company's first major milestone towards creating a more inclusive and aware workforce. Super exciting!

But wait, did you know doing an unconscious bias training can actually *backfire* and have a *negative* effect? Wtf, right?!

What else can we do?

Quotas? 🤯

▶ *“Unfair!”*

▶ *“We can’t lower the bar”*

▶ The argument that gender quotas violate meritocracy is based on fallacies (R. Murray, LSE Blog 2015)

- FALSE: recruitment without gender quotas is meritocratic
- FALSE: a clear, objective definition of meritocracy exists
- FALSE: gender is an inherently unmeritocratic criterion

<https://blogs.lse.ac.uk/politicsandpolicy/merit-vs-equality-argument/>



Journals

American Economic Review

About the *AER*

Forthcoming Articles

Issues

Archived Internet Comments

Submissions

Gender Quotas and the Crisis of the Mediocre Man: Theory and Evidence from Sweden

Timothy Besley

Olle Folke

Torsten Persson

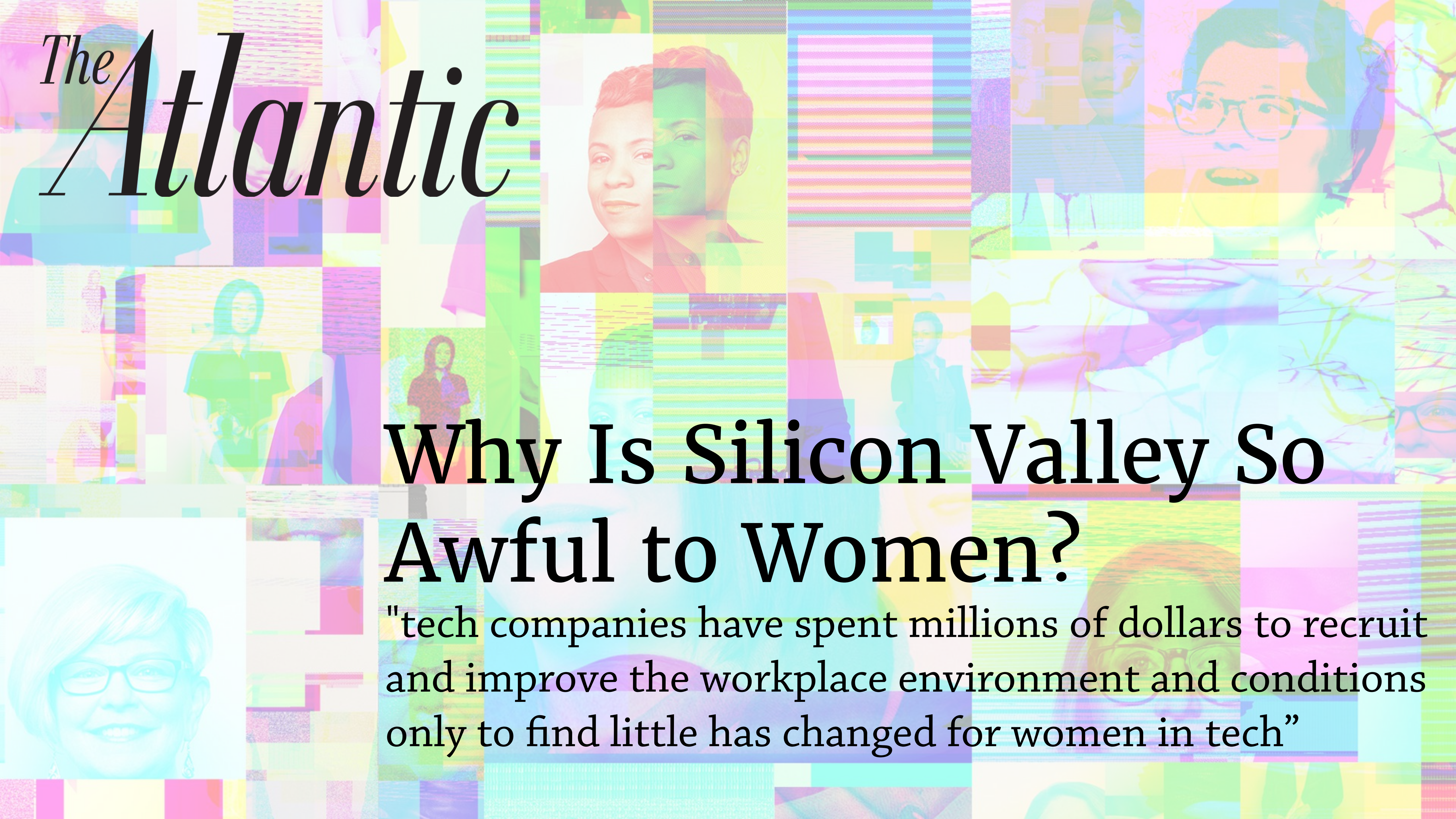
Johanna Rickne

AMERICAN ECONOMIC REVIEW

VOL. 107, NO. 8, AUGUST 2017

(pp. 2204-42)

...a zipper quota, requiring local parties to alternate men and women on the ballot, [...] raised the competence of male politicians where it raised female representation the most. We argue that resignation of mediocre male leaders was a key driver of this effect.



The Atlantic

Why Is Silicon Valley So Awful to Women?

"tech companies have spent millions of dollars to recruit and improve the workplace environment and conditions only to find little has changed for women in tech"

TECH

A Multimillion-Dollar Startup Hid A Sexual Harassment Incident By Its CEO — Then A Community of Outsiders Dragged It Into the Light

“Sexual misconduct happens everywhere. But DataCamp was dealing with a community with abnormally high standards and support for each other.”

**Davey Alba**

BuzzFeed News Reporter

Posted on May 13, 2019, at 9:30 a.m. ET

After *many months* of collective negotiating by the instructor community to demand more transparency & accountability, they still did nothing. Their public announcement is a response to a letter we sent to [@DataCamp](#) one day prior, signed by over 100 DataCamp instructors.
twitter.com/EngelhardtCR/s...



Erin LeDell @ledell

2:50pm - 5 Apr 2019

I created a project for [@DataCamp](#) last year. DataCamp has shown poor handling of sexual harassment, so I don't recommend that you use my project on DataCamp. Instead, try it for free on GitHub! (Do left-handed people really die young? Spoiler: no.) github.com/mbonsma/lefty-...



Madeleine Bonsma-Fisher @mbonsma

2:46pm - 24 Apr 2019

It's incredibly disappointing how DataCamp has dealt with this situation. I will not be developing any more courses with them.
[twitter.com/no_reply/statu...](https://twitter.com/no_reply/status/1111111111)



Sarah Guido @sarah_guido
10:26am - 5 Apr 2019

I have two courses under development at [@DataCamp](#). I have ceased development on both and will not complete them. Outrageous. [twitter.com/gvwilson/statu...](https://twitter.com/gvwilson/status/1116444444444444444)



Chris Fonnesbeck @fonnesbeck

4:33pm - 15 Apr 2019

We have removed any recommendations to Data Camp materials in our lessons & appreciate and support the stances that many in our community have made. Our statement from our Executive Council & Executive Director.

carpentries.org/blog/2019/04/d...



The Carpentries @thecarpentries

2:15pm - 19 Apr 2019

.@dhavidearuliah and @gvwilson are world leaders in technology instruction. @DataCamp fired them after they complained about how sexual harassment was handled. DataCamp said it was "for poor performance." That's absurd. [twitter.com/dhavidearuliah...](https://twitter.com/dhavidearuliah) #rstats #pydata #MeTooSTEM #MeToo 1/

Noam Ross @noamross

10:51am - 15 Apr 2019

NEWS

DataCamp CEO steps down indefinitely in wake of 'inappropriate behavior'

Following an uproar in the R community over what was seen as an inadequate response by the company — including increasing calls to avoid the platform — the CEO and its board spoke out today.

April 24, 2019

May 28

An Update On Our Progress

DATA CAMP



Martijn Theuwissen
May 28th, 2019

▲
25

April 25

An Important Update from the DataCamp Board of Directors

DATA CAMP



DataCamp Board of Directors
April 25th, 2019

▲
43

I am deeply sorry

DATA CAMP



Jonathan Cornelissen
April 25th, 2019

▲
30

A note to our community

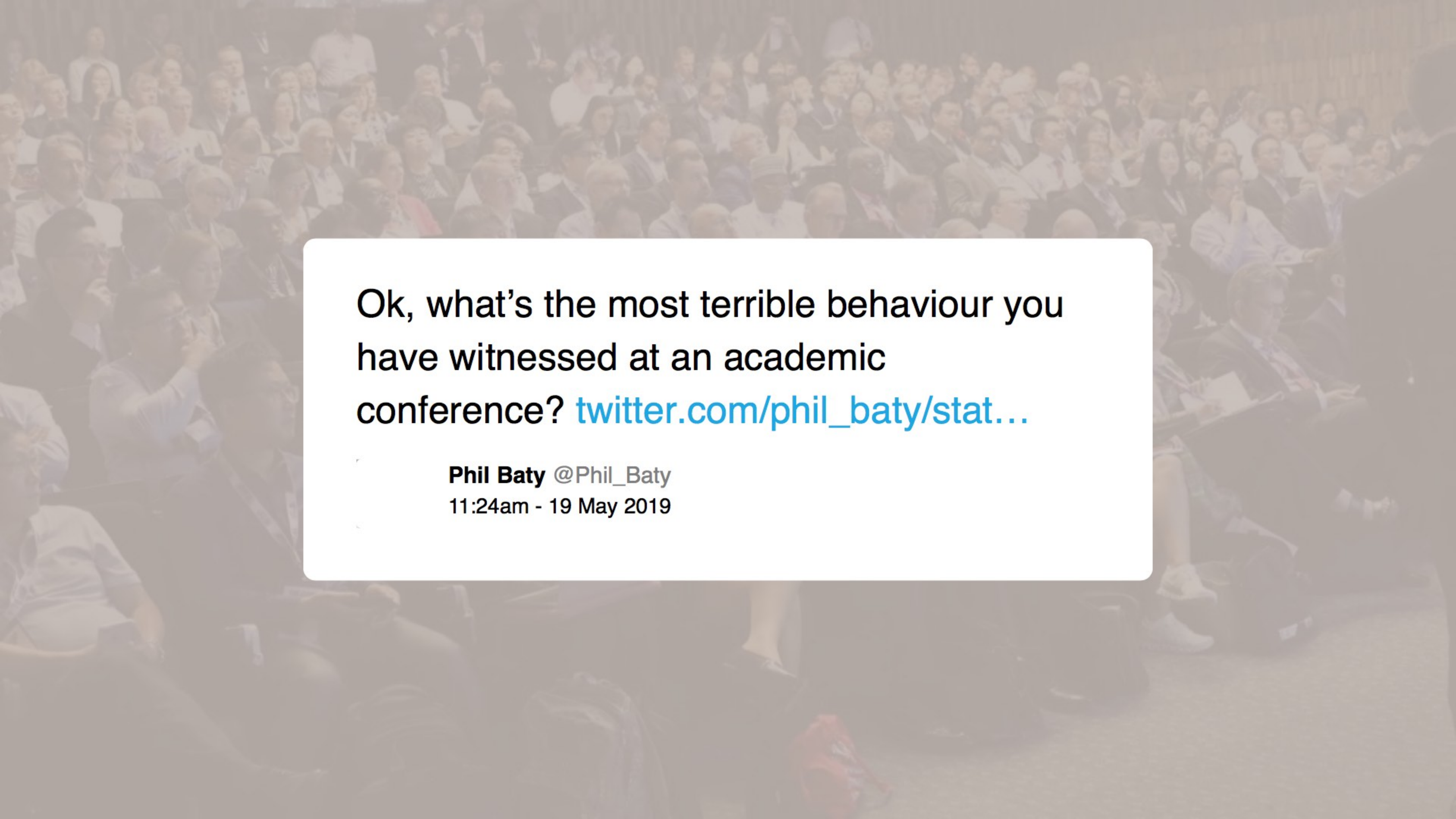
DATA CAMP



DataCamp Team
April 4th, 2019


▲
68

<https://www.datacamp.com/community/blog>



Ok, what's the most terrible behaviour you
have witnessed at an academic
conference? [twitter.com/phil_baty/stat...](https://twitter.com/phil_baty/status/1128111111)

Phil Baty @Phil_Baty
11:24am - 19 May 2019



I admit I thought this tweet would prompt light anecdotes about petty arrogance & poor etiquette, and it did. But the outpouring about unacceptable & illegal sexual harassment & abuse is heartbreaking. We have to act on this.

twitter.com/phil_baty/stat...

Phil Baty @Phil_Baty

7:42am - 20 May 2019

[@Phil_Baty](#) "We" have to act on this? I presume you mean men. Women have been talking about predators in academia for years. Already done the [#MeToo](#) emotional labour.



Dr Laura Watson @lauracwatson

4:34am - 20 May 2019

[@Phil_Baty](#) I'm glad you're more aware of it now. Remember too that abusive behaviour is normalised, so you might not recognise it until you learn to see it. When you do, please call it out.



Dr E D Michelson @Emily_Michelson

8:10pm - 20 May 2019



Kate Devlin  @drkatedevlin · May 20

A Code of Conduct won't necessarily stop sexual harassment and assault but it will state clearly that such things are unacceptable, and that there are boundaries, and that there is redress.



1



7



Andy Prothero @andreaprothero · May 20

Sexual harassment and sexual assault are both illegal. Do academics need a code of conduct to tell them this?



2



1



1



Kate Devlin  @drkatedevlin · May 20

Yep. Some do. Because there are a certain group of men who think that what they do couldn't possibly be sexual assault or harassment.



2



2



10



The Power of Cherokee Women



Dorothy Sullivan/Bison Books. "She Speaks for Her Clan" painting by Dorothy Sullivan, Cherokee. Cover image on Cherokee Women: Gender and Culture Change, 1700-1835 (Indians of the Southeast), by Theda Perdue

“Women had autonomy and sexual freedom, could obtain divorce easily, rarely experienced rape or domestic violence, worked as producers/farmers, owned their own homes and fields, possessed a cosmology that contains female supernatural figures, and had significant political and economic power”

—Carolyn Johnston, history professor at Eckerd College

Cherokee women did not experience rape or domestic abuse—Cherokee women were true equals of men. ictmn.com/ZYc
[#20MinutesofAction](#)



Lorena Barba @LorenaABarba

12:24am - 8 Jun 2016

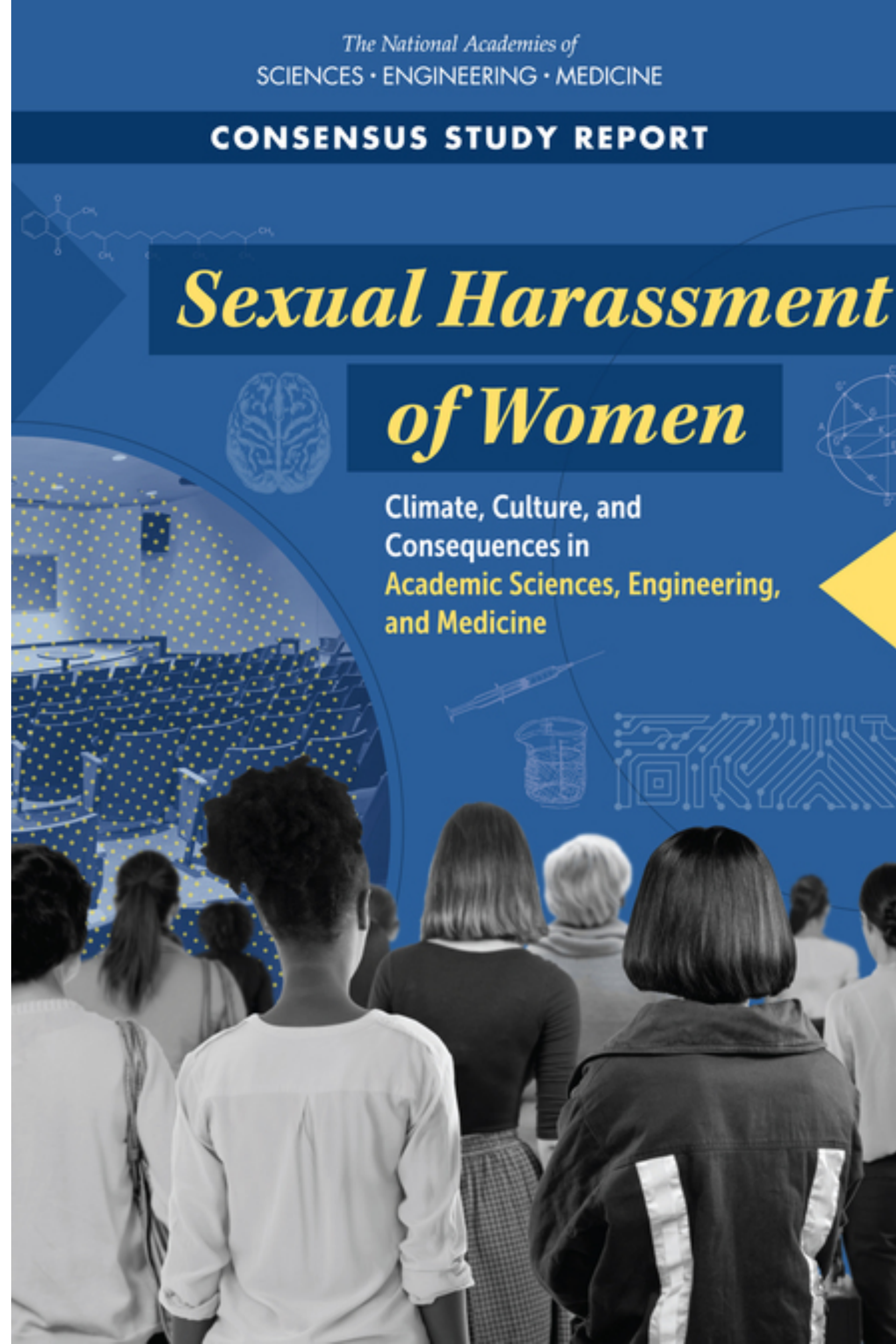
“historically, agrarian capitalism has shifted control of household, land, and means of production to men; has stimulated public policies that disempowered women; and has fostered the ‘cult of domesticity’ in order to justify the inequitable treatment of wives”

—Wilma Dunaway, professor of sociology at Virginia Polytechnic
Institute and State University

**In the US, a sexual assault occurs every
92 seconds**

—Department of Justice, Office of Justice Programs, Bureau
of Justice Statistics, National Crime Victimization Survey,
2013-2017 (2018)

<http://doi.org/c8bbd>



Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine (2018)

... need to go beyond legal compliance to promote a change in culture

"Water can't fix the leaks in the pipeline".
The entire scientific community must come together to confront gender bias, rather than leaving women and other minorities to do the work argues @dr_katieG1 in @NatureEcoEvo (Free access) [nature.com/articles/s4155...](https://www.nature.com/articles/s4155...)

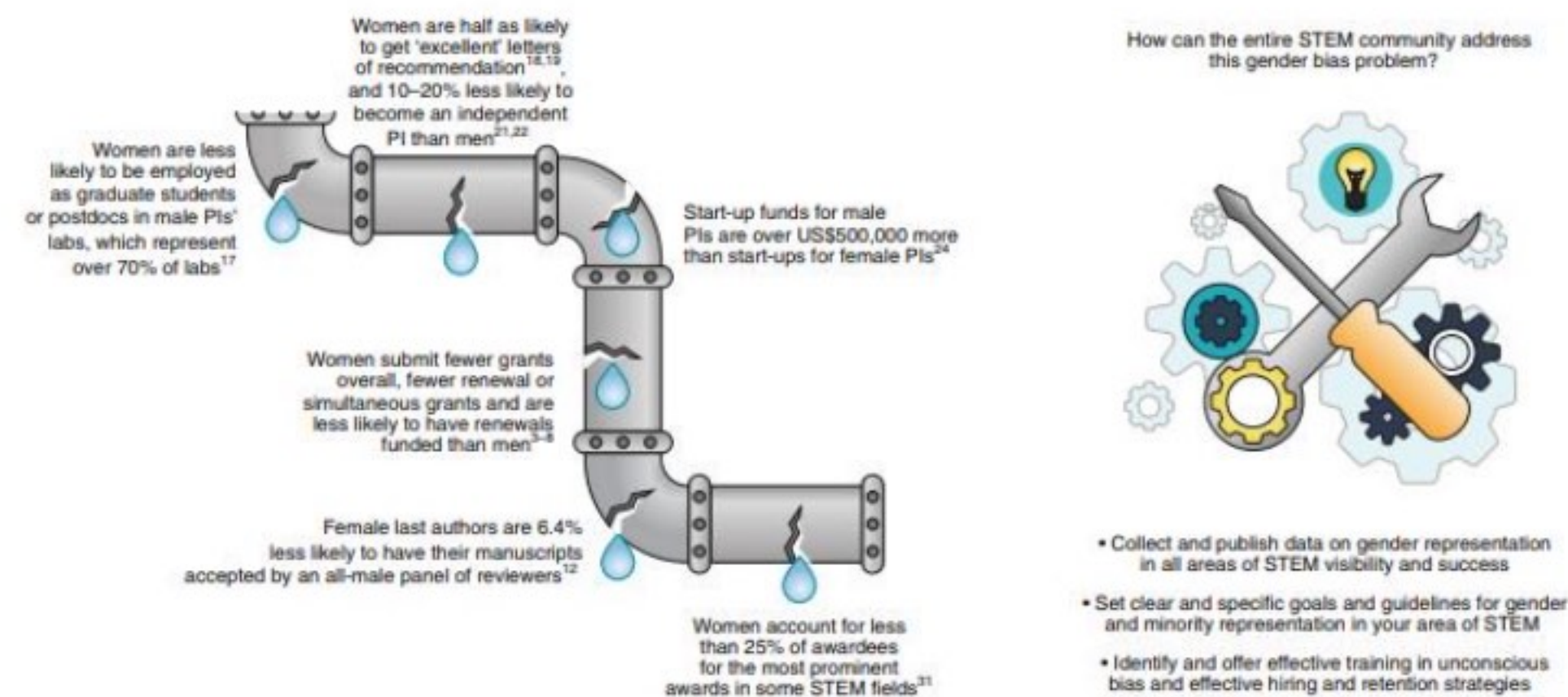
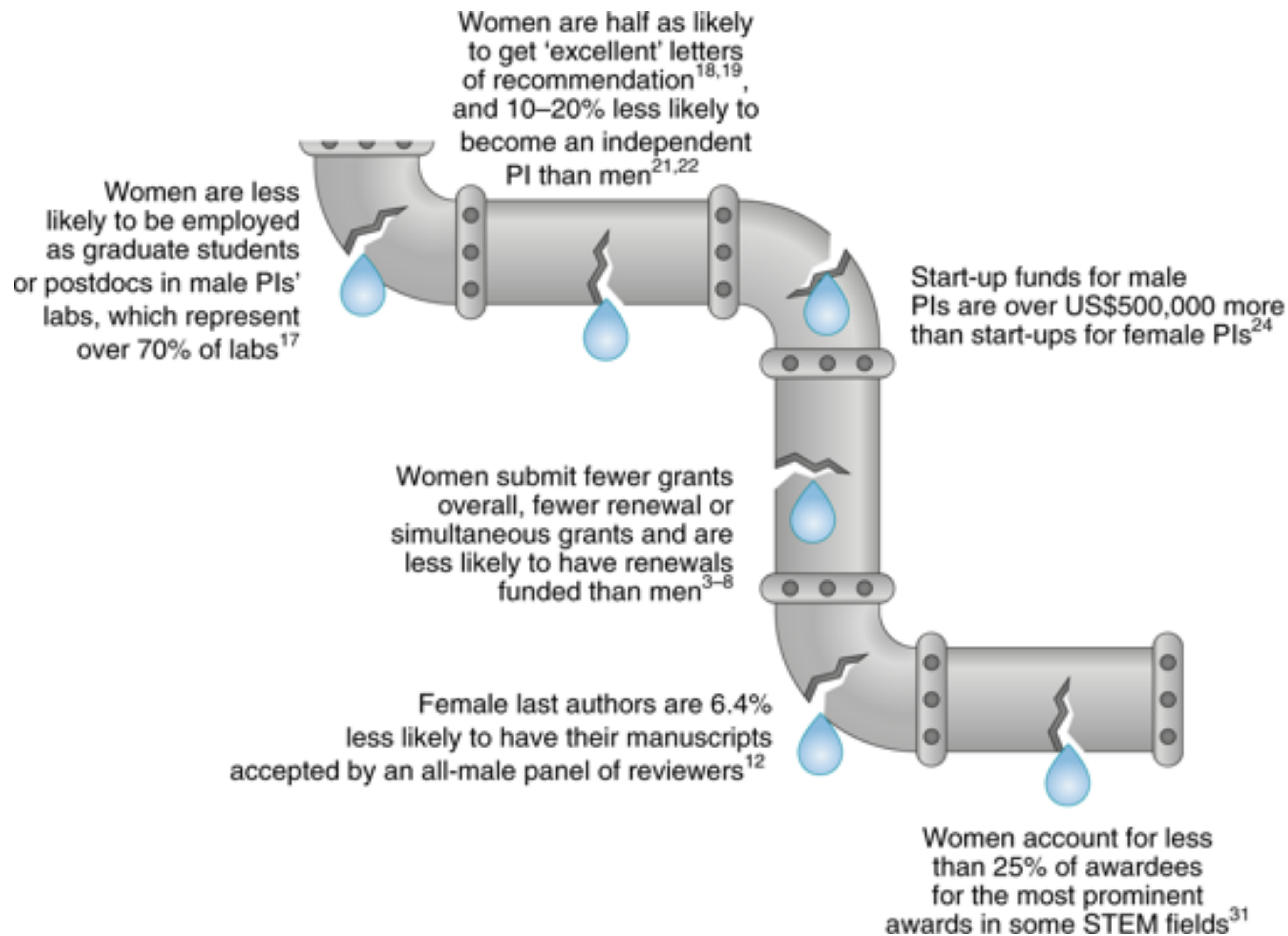


Fig. 1 | The leaky pipeline of women in STEM. The 'leaky pipeline' often depicts women passively leaking out of STEM careers with no discussion of why those leaks occur, but, in fact, the cracks and gaps caused by the biases and barriers are a major cause of the leak of women and minorities out of the STEM pipeline. PI, principal investigator. Credit: Gvais/Shutterstock (pipes and water), 32 pixels/Shutterstock (spanner and wrench).



NatureEcoEvo @NatureEcoEvo

11:06am - 26 Nov 2018



How can the entire STEM community address this gender bias problem?



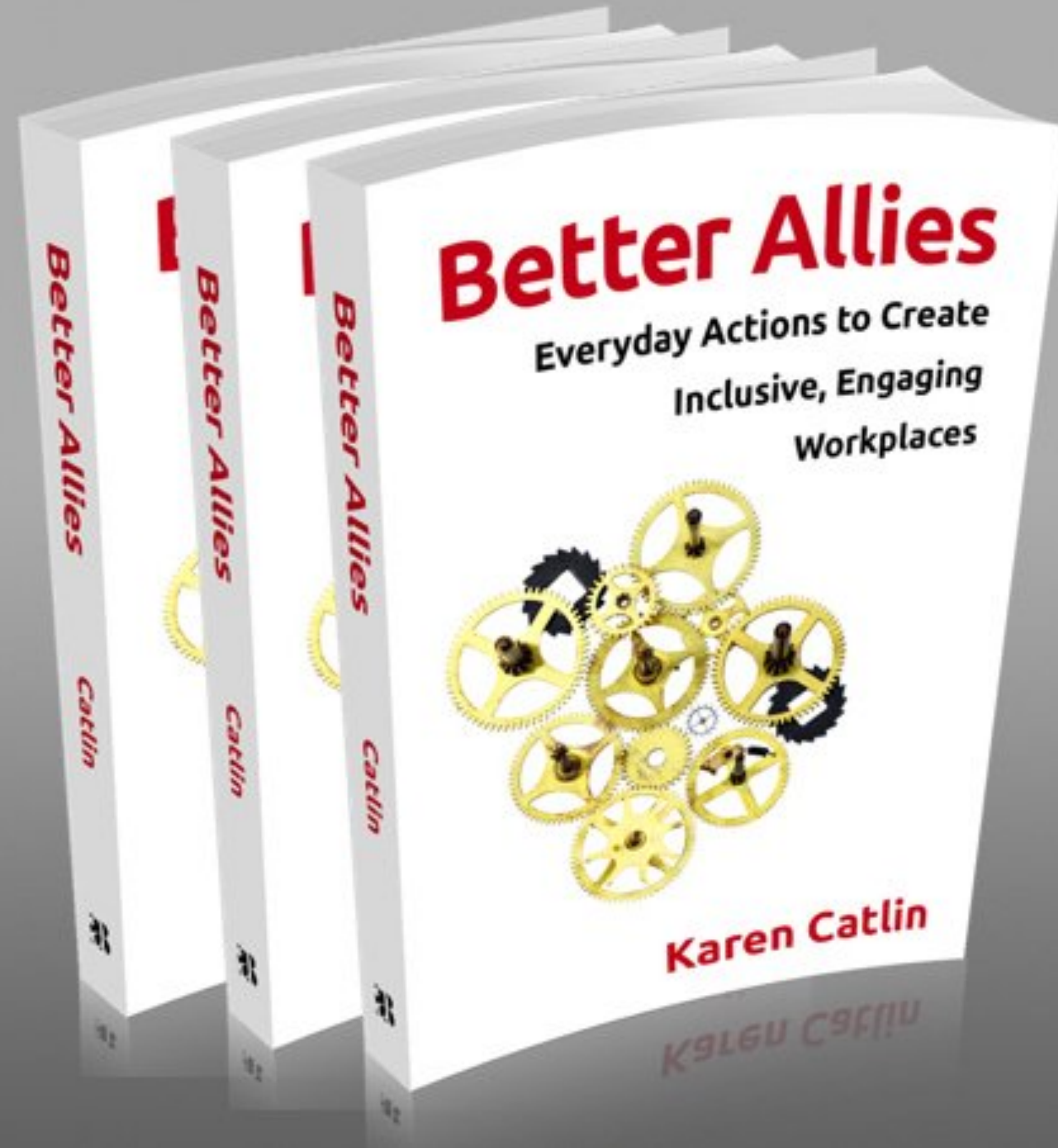
- Collect and publish data on gender representation in all areas of STEM visibility and success
- Set clear and specific goals and guidelines for gender and minority representation in your area of STEM
- Identify and offer effective training in unconscious bias and effective hiring and retention strategies

broadening the participation of underrepresented people in STEM, including women, necessarily requires a widespread willingness (particularly by those in the majority) to acknowledge that bias exists before transformation is possible."



Katie Grogan 🧑🔬 📧 @Dr_KatieG1

12:34am - 19 Sep 2018



<https://betterallies.com>

@betterallies

📌 Pinned Tweet



Better Allies™

@betterallies

5 things [#MaleAllies](#) can do to sponsor women and underrepresented people:

- ✓ Speak their name when they aren't around
- ✓ Share their career goals with influencers
- ✓ Recommend them for stretch assignments
- ✓ Invite them to high-profile meetings
- ✓ Endorse them publicly

9:58 AM · Jan 4, 2018 · [Twitter Web Client](#)

598 Retweets **987** Likes

INTERNAL CONFLICT

Microsoft staff are openly questioning the value of diversity

By [Dave Gershgorn](#) • April 19, 2019

“Does Microsoft have any plans to end the current policy that financially incentivizes discriminatory hiring practices? To be clear, I am referring to the fact that senior leadership is awarded more money if they discriminate against Asians and white men”

Diversity and inclusion update: The journey continues

Nov 14, 2018 | [Lindsay-Rae McIntyre - Chief Diversity Officer, Microsoft](#)

... women in technical roles increased from 18.5 percent to 19.9 percent [compared to last year]

(At this rate, it might take 22 years to reach parity.)

We need

- ▶ men leaders who are allies
- ▶ more women in leadership





One step forward, two steps back: the frustration of diversity efforts in STEM

 @LorenaABarba