A Millennial’s Perspective on Sexism in Science

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On behalf of all Millennials...

regan (@theindiealto). “Did you think I was kidding.” August 14, 2017, 6:50 PM. Tweet.
A bit about Millennials
We are diverse

Figure 2: Share of Population Aged 20 to 34 that is Foreign-Born

Source: Decennial Censuses and American Community Survey; CEA calculations.

Figure 3: Race and Ethnic Group, 15 to 34 Year-Olds

Source: Census Bureau.

A bit about Millennials
Our households look increasingly different growing up

A bit about Millennials
Millennial women are more likely to be educated than millennial men

A bit about Millennials

We’re getting married and having children later.

A bit about Millennials

Our career goals aren’t that different…

A bit about Millennials

...but our education and life goals are

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**Figure 8: Major Field of Study, by Generation**

- **Percent**
  - Business
  - STEM
  - Social Science
  - Education
  - Humanities
  - Health
  - Applied

- **Baby Boomers**
- **Generation X**
- **Millennials**

Source: American Community Survey, 2009-2012; CEA calculations.
Note: Millennials: born 1980 or later, Gen X: born 1965-79, Baby Boomers: born 1946-64. The "applied" category includes communications, library science, criminial justice, culinary arts, and similar fields.

**Figure 4: Percent Reporting Life Goals as Being "Quite or Extremely Important"**

- **Percent**
  - Time for recreation
  - Contribution to society
  - Children better off
  - Live close to family
  - Find new ways to experience things


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A bit about Millennials
And last, but certainly not least

- Allows us to see other people’s “experiences”
- Easy way to connect
- Slactivism or clicktivism
“[Watson and Crick] snuck a peek at Rosalind’s work, without her permission, and used her findings to publish their own work without giving her any credit.”

“[Watson and Crick] won a Nobel prize after Rosalind died. James Watson wrote scathing, tasteless comments about Rosalind in his book *The Double Helix*. He also admitted that he had looked at her data, and people started to figure out how the discovery really happened.”

“When her secondary school wouldn’t let girls into the science lab, her parents threw a fit until she was allowed in the class.”

“She was one of very few women in the physics department. Every time she entered a science lecture, her male classmates would holler at her and make comments about her appearance.”

Women’s past experiences

A Male Host Interrupted A Female Physicist So Much The Audience Intervened

The host has since apologized to Veronika Hubeny, the only woman on the panel.

By Carla Herrera

https://www.huffingtonpost.com/entry/moderator-interrupts-female-physicist-veronika-hubeny_us_593a3153e4b0c5a35c9e0d81
Current experiences

#-able terms
- Mansplaining
- Bropropriating
- Hepeated

Emily @TheBrightgeist

Replying to @NicoleFroio

Writing on evolution & gender for my masters in bioanthro at Cambridge; a man incorrectly explained natural selection to me, cited wikipedia

11:34 AM - 17 May 2017

29 Retweets 229 Likes
“It’s strange that such a chauvinist monster like me has been asked to speak to women scientists. Let me tell you about my trouble with girls. Three things happen when they are in the lab: you fall in love with them, they fall in love with you, and when you criticise them they cry. Perhaps we should make separate labs for boys and girls? Now, seriously, I'm impressed by the economic development of Korea. And women scientists played, without doubt an important role in it. Science needs women, and you should do science, despite all the obstacles, and despite monsters like me.”
– Sir Tim Hunt at WCSJ in Seoul, 8 June 2015
#distractinglysexy

Danielle Spitzer @DNAelleSpitzer - 10 Jun 2015
It's just really hard working in a cold lab because I'm too distracting to the male scientists #distractinglysexy

Sarah Durant @SarahMcDurant - 11 Jun 2015
Nothing like a simple tube full of cheetah poop to make you #distractinglysexy

Sonja Vernes @Sonja_Vernes - 11 Jun 2015
I made it through these brain dissections without falling in love or crying. Phew! #distractinglysexy #TimHunt

Rachel Penczynowski @RichardPen - 11 Jun 2015
You might think we're covered up for bug and sun protection, but it's really just because we're distractingly sexy.

Sue Seifert and Rachel Penczynowski
Steve Diggle @stevediggle • 11 Jun 2015

To save you all time, I have designed an easy to print off sign for your lab. You are welcome.
#distractinglysexy
Implicit bias

CRASH!

?
Implicit bias in everyday life
Implicit bias in STEM

• 127 faculty in biology, chemistry, and physics given application materials for lab manager with undergraduate degree
• Materials were identical...except for the name
• Half were given a masculine name (63), other half a feminine name (64)
Implicit bias in STEM

Male: $30,238.10
Female: $26,507.94

Female faculty were equally biased against the applicant with the feminine name

Moss-Racusin, et.al. PNAS USA, 109, 16474.
Implicit bias in STEM

- Swedish Medical Research Council fellowship
- Women’s success rates were half that of men
- All other things being equal, men were rated as more competent
- “Nepotism” also dictated much an applicant’s success

Effects of Implicit Bias on Roles

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

- Having to provide more evidence of competence than others to prove themselves: 77% Black, 65% Latina, 64% Asian, 63% White.
- That colleagues have suggested they should work fewer hours after having children: 8% Black, 9% Latina, 37% Asian, 26% White.
- That at work, they find themselves pressured to play a stereotypically feminine role: 8% Black, 28% Latina, 41% Asian, 36% White.
- That women in their work environments support one another: 56% Black, 79% Latina, 71% Asian, 77% White.
- They've been mistaken for either administrative or custodial staff: 48% Black, 47% Latina, 23% Asian, 32% White.

*SUCH AS “OFFICE MOTHER” OR “DUTIFUL DAUGHTER.”

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

https://hbr.org/2015/03/the-5-biases-pushing-women-out-of-stem
Effects of Implicit Bias on Roles

1. Prove-it-again
2. The Tightrope
   A. 35% of women feel obligated to play feminine role
   B. 53% of women report backlash for masculine behavior
3. The Maternal Wall
4. Tug-of-War
5. Isolation
   A. 42% of black women
   B. 38% of Latina women
   C. 37% of Asian-American women
   D. 32% of white women

https://hbr.org/2015/03/the-5-biases Pushing Women Out of STEM
So, now what? – everyday life

- Aware of conversations...now we need to HAVE the conversations and get used to being uncomfortable
- More safe spaces to report, ways to combat implicit bias
So, now what? – STEM & Academia specifically

- Most peer review processes are single-blind
  - The reviewers are anonymous to the authors
  - The authors are NOT anonymous to the reviewers
- “It’s easy for science faculty members, convinced of their own high ethical standards, to assume that gender discrimination lies outside of their actions: earlier in the pipeline; in other fields; at other types of institutions.” – Dr. James M. Gentile
So, now what? – STEM & Academia specifically

• Double-blind review process
  • Big names
  • Big name institutions
  • Consider taking advantage of it when it is an option: ChemComm is doing a year-long trial that started in July
  • Know that it is not that big a change to the writing-review process

• Remove opportunities for bias when grading
• Be open to the idea that you are part of the problem

So, now what? - Professional Organizations

• “The American Geophysical Union (AGU) has begun classifying sexual misconduct as scientific misconduct...”
• “after the Entomological Society of America (ESA) incorporated language about sexual misconduct into its code of conduct,...[t]he organization has also stripped offenders of their ESA membership.” – (this took 3 years)
• ACS: “In one extreme case, we barred somebody from a national meeting for a year.”