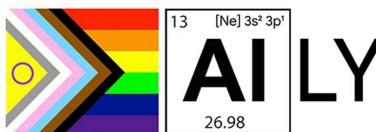
# How to Elevate the Importance of Diversity in the STEM fields — MAKE IT BUSINESS AS USUAL!

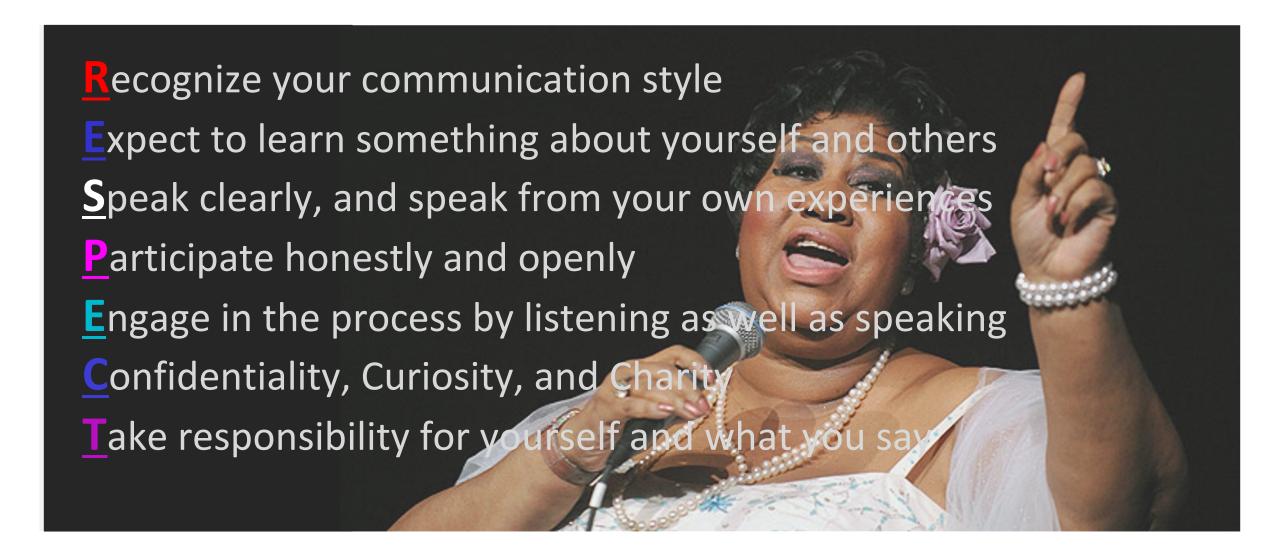


Lee Penn (they/them)
Chemistry Professor
Director of Undergraduate Studies
Parent of a teen
Bike Racer
And so much more.....



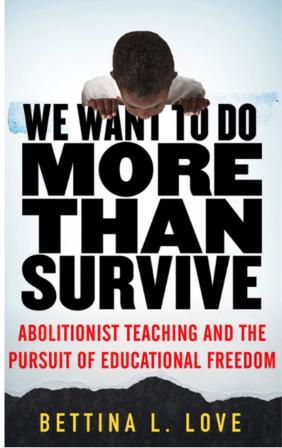


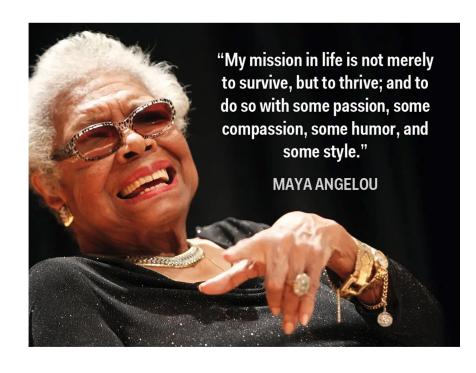
### **Ground Rules**



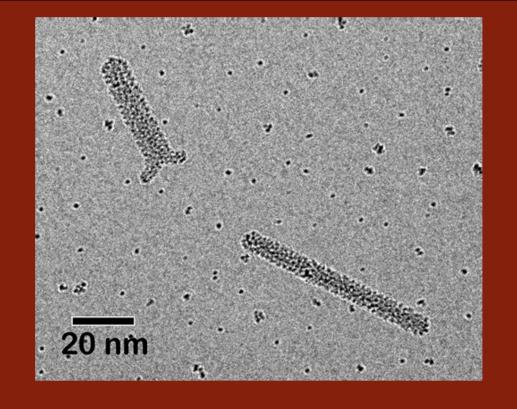
# Elevating the Importance of Diversity in the Chemical Sciences







Epigraph to the book is a quote from Maya Angelou (1928-2014)



## **Growing as Allies**

# This work must become business as usual

To thrive, people who hold marginalized identities need environments in which the status quo is disrupted, dismantled, and discarded.

#### **IMPLICIT BIAS -- LEARN ABOUT IT!**

Also known as implicit social cognition, **implicit bias** refers to the attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner. These biases, which encompass both favorable and unfavorable assessments, are activated involuntarily and without an individual's awareness or intentional control. Residing deep in the subconscious, these biases are different from known biases that individuals may choose to conceal for the purposes of social and/or political correctness. Rather, implicit biases are not accessible through introspection.

-Kirwan Institute
The Ohio State University

#### **IMPLICIT BIAS -- LEARN ABOUT IT!**

- The vast amounts of data we experience far exceeds our cognitive bandwidth and processing speed.
- We have all developed SHORTCUTS that bypass conscious consideration with hardwired responses. These are based on a lifetime of input (positive and negative).
- Effort is required to minimize the influence of these unconscious biases.

We do this when we evaluate **PEOPLE** 



# Are Emily and Greg More Employable Than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination

By Marianne Bertrand and Sendhil Mullainathan\*

The American Economic Review, Vol. 94, No. 4 (Sep., 2004), pp. 991-1013

Job applicants with African-American names get far fewer call-backs for each resume they send out.

#### **Implicit Bias**







"We thought we were blessed with immaculate perception, but it turns out we're infected with implicit bias"

Impact

- hiring men over women [Rudman & Glick 2001]
- cutting minority student org. budgets
- treatment for boart attacks

"No One is Immune to Implicit Bias"



**UCLA Vice Chancellor** Jerry Kang

nttps://www.youtube.com/watcn?v=9vGbwNib5sk&autnuser=0















#### **SHOCKING** implicit bias data

#### Research from Nextion, Consulting Firm

- 60 partners from 22 law firms received copies of a memo with 22 errors (minor spelling or grammar errors, technical writing errors, errors in fact, and errors in analysis of the facts).
- Half told memo written by an African-American man and half told writer was a white man (both Thomas Meyer).
- The reviewers gave the memo supposedly written by a white man a rating of 4.1 out of 5, while they gave the memo supposedly written by a black man a rating of 3.2 out of 5. The white Thomas Meyer was praised for his potential and good analytical skills, while the black Thomas Meyer was criticized as average at best and needing a lot of work.
- Reviewers found an average of 2.9 out of 7 spelling and grammar errors in the memo by the white Thomas Meyer and 5.8 out of seven errors in the memo by the African-American Thomas Meyer.

1. be humble

## Counter Measures:

### 1. be humble

Own it, we are ALL vulnerable. The best scientific data says that if you think you are uniquely objective or fair, you are MORE likely to discriminate.

The only way to be fair is to assume you are not.

- 1. be humble
- 2. be mindful

## Counter Measures:

## 2. be mindful

Slow down and reflect. Monitor your thoughts. Implicit bias is a mental shortcut, and more likely to affect us when we are tired, rushing, distracted, or emotional.

## Counter Measures:

- 1. be humble
- 2. be mindful
- 3. be internally motivated

## 3. be internally motivated

Not because you are afraid of external consequences, but because it is the right thing to do.

## Counter Measures:

- 1. be humble
- 2. be mindful
- 3. be internally motivated
- 4. use inclusion

## 4. use inclusion rather than exclusion

Focus more on reasons to keep a candidate in rather than reasons to exclude them.

## Counter Measures to Implicit Bias:

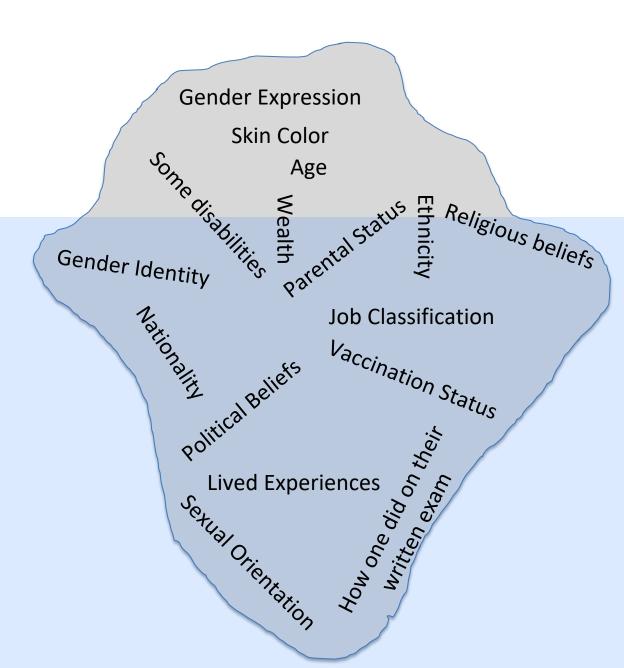
- 1. be humble
- 2. be mindful
- 3. be internally motivated
- 4. use inclusion rather than exclusion

#### ICEBERG MODEL: 90% of an iceberg resides below the water line

VISIBLE -- easy to know

**INVISIBLE** -- harder to know

What other identities might reside ABOVE the line? BELOW the line?



**Intersectionality** is a concept often used in critical theories to describe the ways in which oppressive systems (racism, sexism, homophobia, transphobia, ableism, xenophobia, classism, etc.) are interconnected and cannot be examined separately from one another.

\*\*Kimberlé Crenshaw\*\*

When you think about your own intersecting identities, which bring you privilege? Which bring you marginalization?

How can you serve as an effective Ally to those holding one or more marginalized identities?

SOCIAL IDENTITY	Group Member- ship	You are most aware of	You think about least	Greatest effect on how others see you	Strongest effect on how you see yourself as a person	Strong effect on your own decision making	Gives you power and privilege in Society	Have the earliest memory of
Gender					,			
Sex								
Race								
Ethnicity								
Sexual Orientation/ Attractionality								
Educational Level								
Religion/Faith/ Spirituality/ Meaning								
Social Class								
Age								
(Dis)Ability								
Language								
Nation(s) of origin								
Citizenship								
Body size/type								

## Scenario Example I: New Grad Student

At the annual poster event, a female graduate student was talking about how she had just joined a group with a brand new female professor.

She was asked by an older male graduate student, 'Oh, did you join her group because she is a woman?"

How do you think this may have impacted the female graduate student?

How do you think it may have impacted folks who witnessed the questions?

What might you do?

NOTE: both "female" individuals identify as women, in this example.

## Definition: microaggression

MICRO - emitter AGGRESSION - absorber

MICROAGGRESSION: Coined in 1970 by Harvard University psychiatrist Chester Pierce, the term "microggression" refers to a **subtle slight or snub** directed toward historically stigmatized individuals, especially minorities.

## **EXAMPLES** of microaggressions

Being directed to the men's bathroom

Being directed to the +1 meeting

A physicist directed many questions to a white male colleague standing next to me, even though the questions were about my work.

"You're technically inclined, for a woman."

"Oh -- you speak German so well!"

"Yes -- I was born in Germany...."

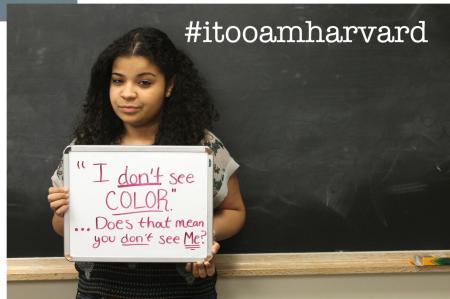
You'll get a job so easily because every STEM department is looking to hire women (or people of color etc...)

Anna only got the job because she's a woman

Being repeatedly asked by multiple people ... if I'm lost or looking for my boyfriend's office.







## Definition: microaggression

Subtle bigotry can be harmful. Research shows us it's complicated!

"the toxicity of microaggressions stems largely from their ambiguity"

IGNORE: risk becoming the target of future transgressions

ADDRESS: risk being accused of hypersensitivity, paranoia

https://blogs.scientificamerican.com/observations/the-science-of-microaggressions-its-complicated/

#### Potential impacts of microaggressions



Something people say when they have never experienced microaggressions...

#### Microaggressions can be PAINFUL and CONFUSING

How do I deal with micro-aggressions?

The target constantly questions themself

Did I interpret that correctly?

Did they say what I think they said?

What did they mean by that?

Should I say something?

Saying something may make it worse.

They'll probably think I'm overreacting.

Speaking up is going to hurt more than it helps.

#### Business as Usual: Learn how to say people's names!

ASK people to help you learn to say their name correctly

PRACTICE PRACTICE

USE resources like "Name-Coach"

My NameBadge (Switch to Preview Mode)

https://www.name-coach.com/rleepenn

#### If You Don't Know How to Say Someone's Name, Just Ask

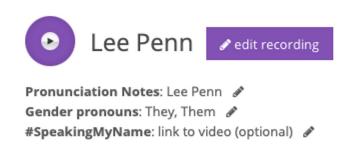
Ruchika Tulshyan

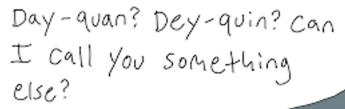


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Study of K-12 students of color: Students whose names were mispronounced in the classroom had reduced social emotional well-being, which harmed their ability to learn.

Race Ethnicity and Education; Volume 15, 2012 - Issue 4







Business as Usual: Avoid Gendered Terms of Address

GENDERED words: Sir, Ma'am

**INTENT:** Polite and professional

**IMPACT:** Exclusionary towards people who are

nonbinary

GENDERED words: Sir, Ma'am

EXAMPLE: Excuse me, Sir!

Alternative: Excuse me, please!

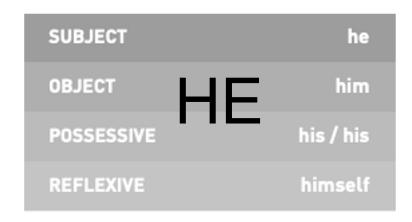
**IMPACT:** Polite and professional

WHY are pronouns important?

Gender permeates every facet of society Gender is a primary aspect of our personal identities

Honoring a person's pronouns communicates

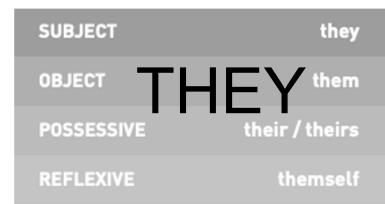
VALIDATION RESPECT BELONGING



Three common sets

https://pronouns.minus18.org.au





## On the topic of SINGULAR THEY

**THEY** is a grammatically correct AND gender-neutral pronoun.

It has been used for centuries:

Shakespeare

Oscar Wilde

Merriam-Webster Dictionary....

SIDENOTE: YOU was PLURAL and THOU was SINGULAR

Language evolves!

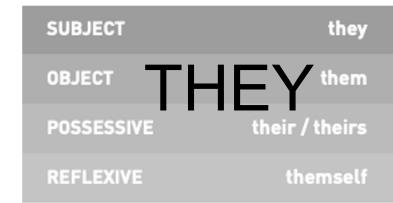
French traditional pronoms are il (male), elle (female), ils (plural), elles (plural referring exclusively to female people or things).

The most common NB, neutral pronom is "iel", that can be spelled iels, iell, ielle, ille, illes...

I also know ppl who go by ol, al, ul & yul.

Estance Moriarty (@EstanceMoriarty)

In French, people have begun to use the pronoun "iel" (and sometimes "ille") to refer to a nonbinary person. Linguistically, these are a mix of "il" and "elle", but they are so far yet to be officially adopted into the French language by the Académie Française.



Geschlechtsneutrales Pronomen

PRONOUNS LIKE XIER AND SIER – TRANSLATING SINGULAR THEY INTO GERMAN

The pronouns »ich«, »du«, »wir« or »uns« are indeed gender neutral. As in English, the third person singular is different.

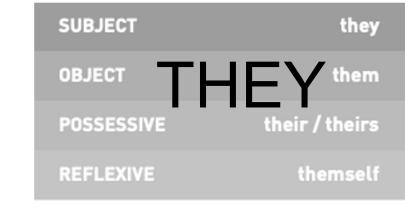
HISTORY OF XIER AND SIER PRONOUNS

**VERSION 3.3 (2020)** 

xier|xieser|xiem|xien (personal pronoun) dier|dies|diem|dien (relative pronoun) xies... (possessive pronoun)

"You do not have to be perfect to express respect."

-Illi Anna Heger



Ich verwende das Pronomen XIER.

Wenn sie über mich sprechen, sie solten das Wort xier verwenden.

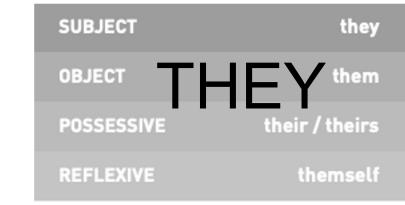
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## Scenario Example II-instruction

A student in your section comes to see you after lab. They tell you that during lab they often hear homophobic jokes and it makes them uncomfortable.

-What might you say to the student? What might you do?

## Scenario Example II-instruction

A student in your section comes to see you after lab. They tell you that during lab they often hear homophobic jokes and it makes them uncomfortable.

-What might you say to the student? What might you do?

SWITCH IT UP: During lab/class, you WITNESS the problematic slurs and jokes....

-NOW -- What do you do?

# Business as Usual: Announce bathroom locations

Women's room location is....

Men's room location is....

All-Gender bathroom location is....

ADA accessible bathroom location is....







#### www.refugerestrooms.org/





Directions: Fourth Floo

Comments: Not single stall, but entire bathroom can be locked from inside.

Propose an edit to this listing



## WE JUDGE OURSELVES ON OUR INTENT WE JUDGE OTHERS ON THEIR MPACT

#### **CLOSING DISCUSSION:**

How we can serve as effective allies towards folks with marginalized identities, whether or not we hold one or more of those identities.

- I. This is everyone's work every day.
- II. Ally ≠ title à it's about ACTION.
- Listen and educate yourself.
- •Speak up but not over (Franchesca Ramsey).
- Place voices of marginalized ahead of your own
- •Know your limits the impact of over-reaching can be harmful, no matter how good your intentions.
- •When you mess up listen, acknowledge, apologize, be accountable, move on, and work to improve (on your own time).

#### **WE ALL MAKE MISTAKES!**

"You do not have to be perfect to express respect."

-Illi Anna Heger

WHEN we mess up:

**Acknowledge** 

**Apologize** 

**Try Again** 

Move On

Keep practicing on your personal time

#### **SCENARIO III-Canton**

Scenario: At a student group meeting, a member gave a presentation and told some jokes that teased various student members from another canton (e.g., a presenter from Zurich about a student from Bern).

Oh -- it'll take Anna a long time to finish that experiment because she is from Bern. I should just do the work myself.

#### SCENARIO IV-The housewife laser

Scenario: A student went to retrieve a laser for giving a presentation, and she selected a specific digital laser based on the software necessary to work with her presentation computer and software. The staff member comments that she had selected the "housewife" laser because she wouldn't know how to use a "real" laser.

NOTE -- the student uses laser spectroscopy in her graduate research project.

## SCENARIO V-The messy notebook

A group of teaching assistants are grading lab notebook entries. One TA comments that a Chinese student's lab notebook is messy. Another responds -- Oh, that's because they are Chinese.

How might you respond?

#### SCENARIO VI-Black German Student

A new German graduate student has arrived for his first day in the department. He is Black and German. When another new graduate students asks him where he is from, he responds "Berlin." The other graduate students then says — "No, I meant where are you really from?"

#### **SCENARIO VII**

Scenario: A research advisor organizes a social event and says group members are welcome to bring a PLUS ONE. A graduate student, Liz, brings a date. Both Liz and her date use she/her pronouns. Liz introduces her date to another member of the group, and she says, OH -- I knew you were a lesbian! Liz visibly shrinks upon hearing that and doesn't say much for the rest of the event.

Who do you think this may have impacted most strongly? And Why? What could you have done in the moment? What could you have done after the fact?

#### **SCENARIO VIII**

At a meeting (staff, faculty, student group), Teresa offers up an solution to the problem at hand. There's a little bit of silence. Then, Michael restates Teresa's idea. Folks respond positively and the solution is adopted.

How do you think this may have impacted Teresa?

How do you think it may have impacted folks who witnessed the questions? What might you do?

NOTE: In the U.S., Teresa is a name traditionally used for women, and Michael is a name traditionally used for men

#### SCENARIO IX

A graduate student has just arrived to her building, and she stops to check something on her phone. Someone walking through the hall stops and asks – are you looking for your boyfriend's lab?

#### **SCENARIO X**

You and your colleague have just arrived to the national conference for your field (e.g., National Chemistry or Physics Society meeting). You both go to the counter to obtain your conference credentials. Your colleague goes first, and she is immediately directed to the PLUS ONE meeting.