

## **Session Outcomes**

- ➤ Review evidence- based research on unconscious bias and discuss the range of implications
- Examine the role of bias on academic careers, healthcare interactions and healthcare disparities
- Explore strategies to address unconscious bias

# Managing input

➤ Vast amounts of information coming at us; we can only manage a little of it at any moment

➤ We find ways to filter out what's "not needed"

Perceptions Interpretations

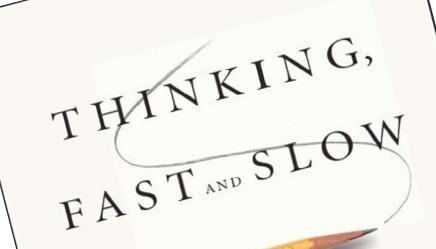
Preferences Biases

➤ Varies with our perceptive lens of the moment

In the market for a car Becoming pregnant

- Assessments affected by time pressures and cognitive demands; resort to what's "efficient;" fall back on familiar ideas.
- "Fast Brain"





DANIEL KAHNEMAN

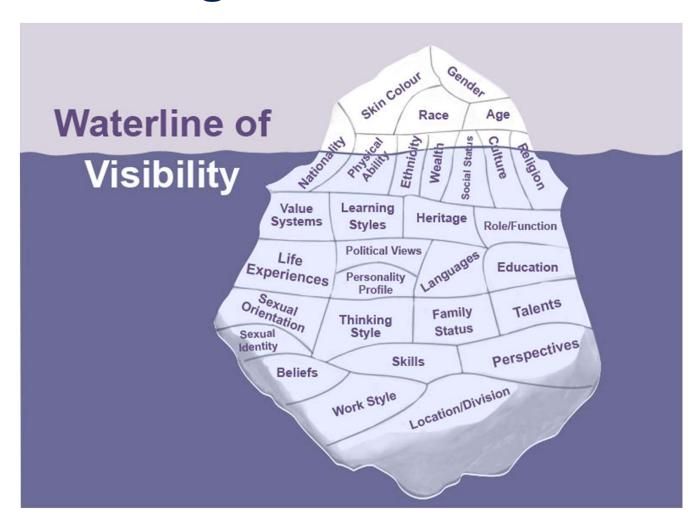
WINNER OF THE NOBEL PRIZE IN ECONOMICS

# What is unrecognized (unconscious/implicit) bias?

- ➤ Not good, not bad
- >We all have it
- ➤ It's necessary to manage the world
- > Hard-wired into us
- ➤ "Better safe than sorry"
- Contributes to making decisions about others based on what feels likeable, safe, valuable, competent
- ➤ IOM has noted that gender, race/ethnicity, and age are very likely to trigger unrecognized bias because they are usually readily apparent.



# Bias Iceberg



http://www.brookgraham.com/whatwedo/iceberg.aspx, accessed May, 2018

# Biases vary with what we've learned/been taught is "desirable" or not

- > Heavier employees get lower performance reviews
- Boys tend to be called on more in school than girls
- People with accents (except British!) are less likely to be believed
- People with dominant group names more likely to be called back for interviews

(With equivalent resumes, Kristen and Brad 50% more likely to be called back than Tamika and Tyrone)

Marianne Bertrand and Sendhil Mullainathan The American Economic Review, Vol. 94, No. 4, (Sep., 2004), pp. 991-1013

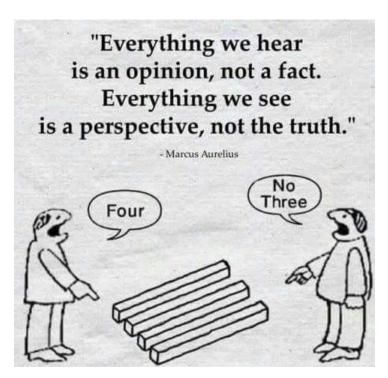
# Consequences?

### May interfere with:

- > Effective teamwork
- Hiring the best candidate for a job
- Giving a fair review
- Listening to someone's ideas
- Providing good mentoring

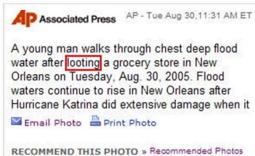
It's not a matter of good people vs. bad people—it's part of us all.

Even with conscious commitment to fairness and effort to behave without prejudice; still have unconscious biases that may obscure our vision.



# Media bias





Average (Loading)





## Mental models as filters

- Mental models of gender deny opportunity to be appraised positively on the basis of individual traits
- Acting against type risks dismissal or marginalization
- Unusually sensitive man risks derision
- > Assertive woman might be "uncaring," "bitchy"
- Students judge women faculty who are not nurturing much more harshly than non-nurturing men (Chatman and Kray, UC Berkeley)
- Unconscious assumptions about the way leaders, scientists, and innovators behave
  - Align with prescriptive attributes ascribed to men far more than those ascribed to women (since men have been the leaders)
  - Men advantaged at the outset in evaluation in these domains

### Some observations about leaders

Less than 14% of American men are over 6' tall, but almost 60% of corporate CEOs are over 6'

Less than 4% of American men are over 6'2" tall, but over 36% of corporate CEOs are over 6'2"

Is the gene for tall linked to the gene for good leader? Or do we just like to be led by tall men?

How many American women are over 6' tall? .7%

# Unconscious bias against girls and women an example

### **Orchestras**

Female musicians complained of bias

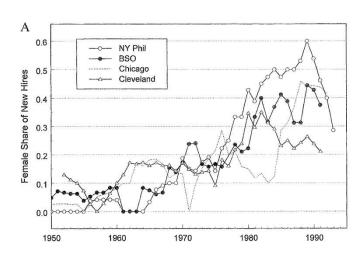
Prominent directors disputed, stated personal belief that women were inferior musicians

Auditions behind a screen→

Women passing first round ↑50%

Women hired **↑**300%

Over next 20 y women in world's leading orchestras: 5→36%



Proportion of new hires who were female, 1950-90

Goldin C and Rouse C. Am Econ Rev 2000

# "Judgment of Paris" 1976

Prevailing opinion that French wines better than California

British wine merchant organized blind tasting US (California) vs. France

California wines #1 in both red and white



Not well-received, even ignored in France

Repeated multiple times, including 30<sup>th</sup> anniversary (2006)

Bottle Shock (movie)

# Warmth and competence



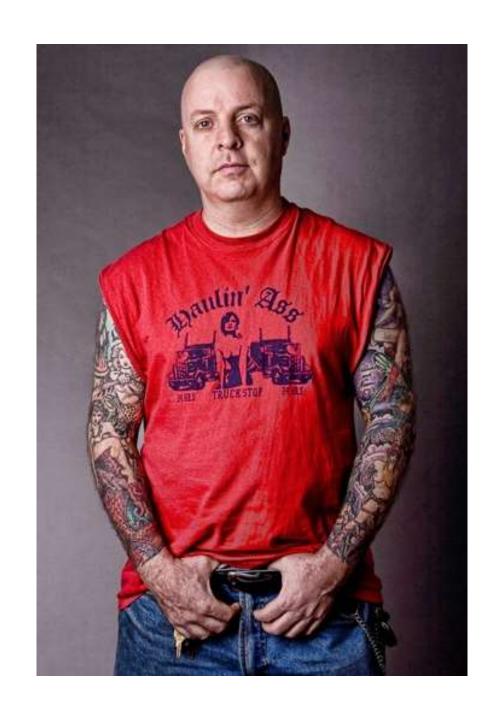


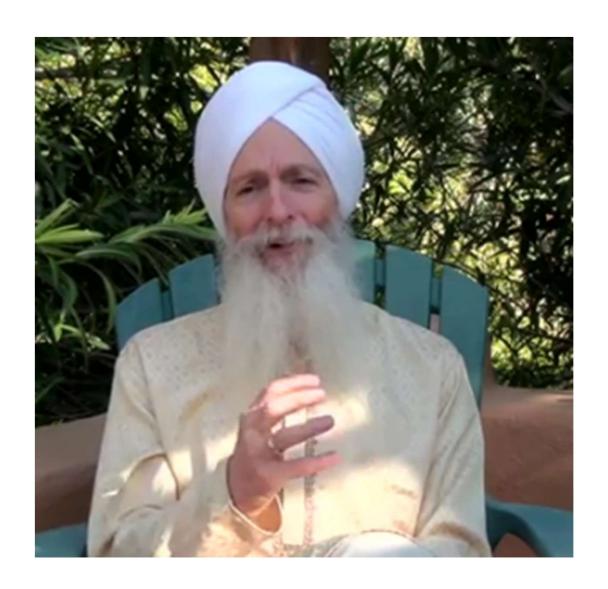




























Gender

Ethnicity

Skin tone

Age

Setting

What patterns do you notice?

Facial expression

Body posture

Body type

Clothing



### Pratibha Patil

- Economist
- Attorney
- First female president of India, 2007-2012





Right Honorable David Lammy, Member of Parliament (UK)



Ted Bundy Serial rapist, admitted to killing 30 women



### Oxana Federova

- Miss Universe 2002
- Russian police captain and fashion model
- PhD in civil law





#### Katherine Johnson

NASA mathematician (human computer)

Determination of Azimuth Angle at Burnout for Placing a Satellite Over a Selected Earth Position, report laying out the equations describing an orbital spaceflight in which the landing position of the spacecraft is specified-first time a woman in the Flight Research Division received credit as an author of a research report.

Calculated trajectories for the Apollo space missions by hand

Requested by John Glenn as a check on the computers

Subject of film "Hidden Figures."



David Ores, MD

NYC General practitioner

UCSIS Civil Surgeon

Founded "Fresh Start": laser tattoo removal to help ex-cons and gang members start a new life.



Bernie Madoff ran the largest Ponzi scheme in history Estimated \$50B losses to individuals and charities

### Mae Jemison

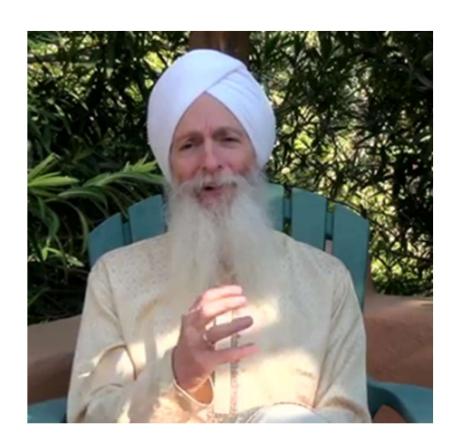
- Physician
- Professor
- U.S. Astronaut (Space shuttle Endeavour 9/12/92)





### GuruGanesha Khalsa

- Sikh devotional musician
- One of the world's leading sales training experts





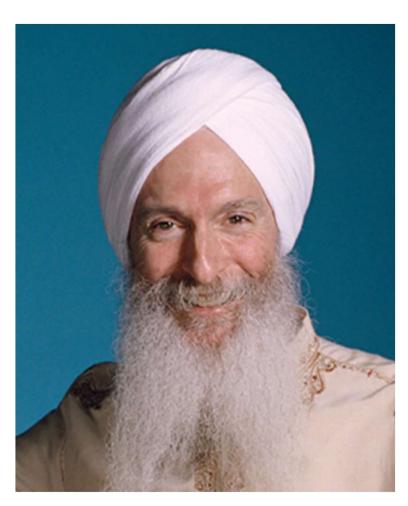
### NUMBER 1 NUMBER 2





#### NUMBER 3 NUMBER 4





#### NUMBER 5 NUMBER 6

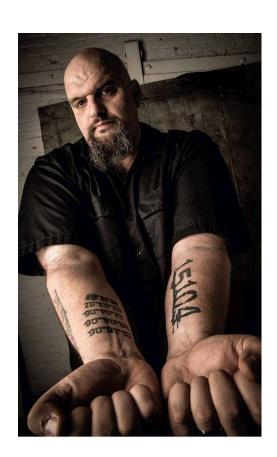




NUMBER 5 NUMBER 6



Ted Bundy
Serial killer and rapist



John Fetterman Harvard-educated Mayor of Braddock, PA

### #WhatADoctorLooksLike

#### DR. TAMIKA CROSS





I'm sure many of my fellow young, corporate America working women of color can all understand my frustration when I say I'm sick of being disrespected.

Was on Delta flight DL945 and someone 2 rows in front of me was screaming for help. Her husband was unresponsive. I naturally jumped into Doctor mode as no one else was getting up. Unbuckle my seatbelt and throw my tray table up and as I'm about to stand up, flight attendant says "everyone stay calm, it's just a night terror.... See More

A couple mins later he is unresponsive again and the flight attendant yells "call overhead for a physician on board". I raised my hand to grab her attention. She said to me "oh no sweetie put ur hand down, we are looking for actual physicians or nurses or some type of medical personnel, we don't have time to talk to you" I tried to inform her that I was a physician but I was continually cut off by condescending remarks.

Then overhead they paged "any physician on board please press your button". I stare at her as I go to press my button. She said "oh wow you're an actual physician?" I reply yes. She said "let me see your credentials. What type of Doctor are you? Where do you work? Why were you in Detroit?" (Please remember this man is still in need of help and she is blocking my row from even standing up while bombarding me with questions)...

#### DR. FATIMA CODY STANFORD



f)

"...a woman sitting next to her started shaking and hyperventilating.

Stanford said she was already aiding the passenger when a flight attendant came by to check the situation. According to Stanford, the flight attendant asked if she was a doctor, to which Stanford replied yes.

Stanford said she continued to stabilize the passenger when a second flight attendant came to ask for her medical license. Stanford showed the flight attendant her license. Stanford said that shortly afterward both flight attendants came back and questioned her credentials and asked if the medical license she was carrying belonged to her.

Stanford described the exchange as "bewildering."

@Delta my experience last night when a fellow passenger needed help shows that being a @harvardmed @MassGeneralMDs does not shield from #racism #WhatADoctorLooksLike #ILookLikeADoctor #ILookLikeASurgeon #BiasInMedicine #implicitbias #BlackWomenDoctors do exist.

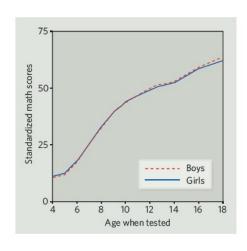
# What do we know about unconscious bias and women in medicine and science?

There is an implicit association for math and science that favors boys over girls, beginning ~ 8<sup>th</sup> grade

The assumption impacts academic participation, achievement, guidance, professional performance



But actually



➤ Both men **and** women asked to rate works of art, articles, grant proposals, and CV give lower ratings if they believe they are rating the work of women.

#### **BUT**

- ➤ Both men and women tend to deny evidence to the contrary.
- ➤ In academics we believe strongly in a meritocracy

# True?

### NIH Pioneer Awards

2005 1<sup>st</sup> year 60/64 judges were male 9/9 winners male Selection process thought to have favored men

- Time pressure on evaluators
- No face-to-face discussion about applicants
- Uncertain performance criteria
- Subjective assessment of leadership
- Potential rather than actual accomplishments
- Risk taking
- Emphasis on self-promotion
- Weight given to letters of recommendation
- Need for finalists to make a formal, in-person presentation with focus on the individual and not his or her science was the focus of evaluation.

### NIH Pioneer Awards

Modified process

Diverse selection committee

Some clarification re: evaluation

2006 > 50% awardees women and minorities

- 4 women
- 2 URM minority
- 11 total

2018 - 10 awardees

- ■5 women
- ■5 men
- 4 scientists of color (all men)

### Letters of recommendation

- > Letters for women
- > Shorter
- More likely to lack basic features Commitment and relationship of recommender and applicant Specificity of applicant's focus and record Evaluation or comparison of traits and accomplishments
- More likely to contain "doubt raisers"
  Hedges, unexplained comments, faint praise, irrelevancies
- Less likely to include high status terms

  More likely to refer to her teaching but his research

Trix F and Penska C. Discourse and Society, 2003

## Back to the meritocracy

Moss-Racusin: Randomized double-blind study

127 faculty members at research-intensive universities (biology, chemistry, and physics)

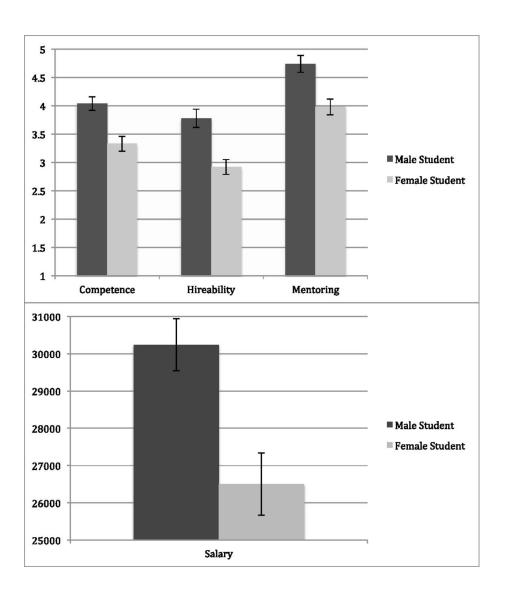
Rated applications of students for lab manager positions

Identical CVs; Male vs. female name

The findings..?

Moss-Racusin CA, et al. PNAS 2012

# Science faculty's subtle gender biases favor male students



Competence, hireability, and mentoring by student gender condition (collapsed across faculty gender).

Salary conferral by student gender condition (collapsed across faculty gender).

Moss-Racusin C A et al. PNAS 2012;109:16474-16479

# And what about differences between men and women evaluators, different age groups?

- ➤ No difference between male and female faculty
- ➤ No difference between faculty members by age
- ➤ Both male and female faculty liked the female applicant more,

#### **But**

- ➤ Did not translate into assessment of competence, or
- >Job offer, equitable salary, or valuable career mentoring.

# Faculty

- > "...did not exhibit outright hostility or dislike toward female students, but were instead affected by pervasive gender stereotypes, unintentionally downgrading the competence, hireability, salary, and mentoring of a female student compared with an identical male
- Female students *perceived* as less competent
- Faculty members' bias was independent of their gender, scientific discipline, age, and tenure status. Suggests that it is likely unintentional, generated from widespread cultural stereotypes rather than a conscious intention to harm women."

### Presumed Incompetent

- ➤ Gendered racism: "..African American women faculty must, at once, deal with the dual burdens of being both African American and female in academic environments that place little value on either trait."
- Fall victim to perceptions (by students, staff, colleagues and administrators) that they are incompetent (Singh, et al., 1995)
- Continually challenged to prove that they were not hired, or retained, because of affirmative action or tokenism
- Find their authority challenged in the classroom, and that shows up in course evaluations
- Women faculty of color report dealing with both gender and racial oppression in their peer interactions. (Pittman, 2010)
- Black women negotiate the mothering-yet-obedient "mammy" stereotype (Moses 1997; TuSmith and Reddy 2002)
- Latinas deal with the presumption that they prefer to focus on home and family (Nieves-Squires 1991)
- Asian and Asian American women grapple with the stereotype of being passive (Hune 1998).

# Vicious Cycle

- The problem is with stereotypes.
- ➤ Gender disparity in science and technology may be, at least in part, the result of a vicious cycle.
- ➤ When we see few role models in a professional setting it activates the stereotype that women/UR aren't good at science or leadership or....
- ➤ Makes it harder for women/UR to enter those fields. To stay. To thrive.
- ➤ Harder to feel comfortable taking your place at the table, discussing your work with confidence, having a good argument about an idea
- "If people like me aren't represented in this field, then it makes me feel like it's a bad fit, like I don't belong here."

NPR: Shankar Vedantam July 12, 2012 4:58 PM

# Treatment recommendations for 4 common pediatric conditions

- Explicit attitudes re race
- IAT re race
- Clinical case vignettes
  - Pain management
  - UTI
  - ADHD
  - Asthma
- Random distribution
  - 2 male (Pain, ADHD)
    - One black, one white
  - 2 female (asthma, UTI)
    - One black, one white

- Implicit attitudes and stereotypes were associated with Rx recommendations re pain management
- Greater pro-white bias



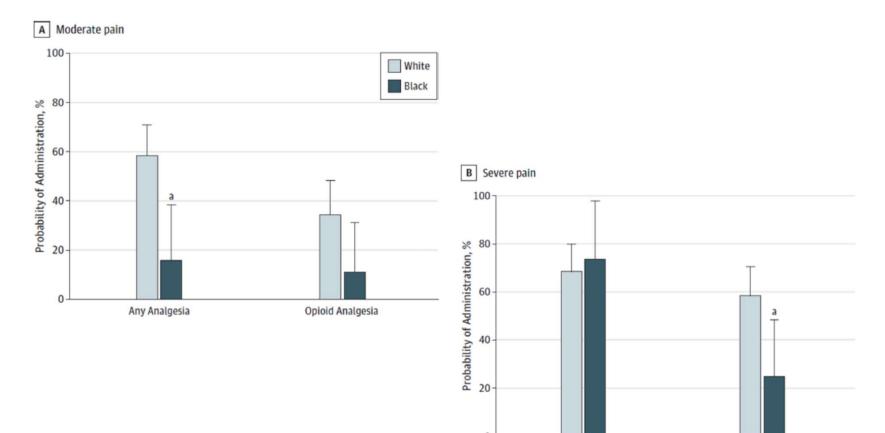
 Less likely to prescribe narcotic analgesic for AA patient after open reduction and fixation of femur fracture

### Racial Disparities in Pain Management of Children with Appendicitis in Emergency Departments

Goyal MK, JAMA Pediatr '15

Any Analgesia

Opioid Analgesia

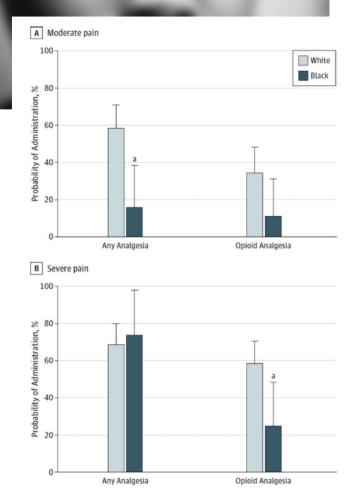


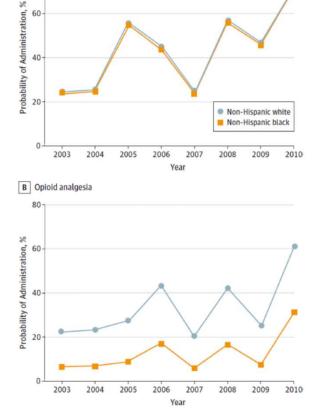
Black children had 1/5 the odds of receiving opioid analgesia of white children

# Racial Disparities in Pain Management of Children With Appendicitis in Emergency Departments

A Any analgesia







Black children had 1/5 the odds of receiving opioid analgesia of white children

# Differences in Physicians' Communication With Black and White Patients at the End of Life

Elliott AM; Alexander SC; Mescher CA; Mohan D; Barnato AE. Journal of Pain & Symptom Management. 51(1):1-8, 2016

- Hi-fidelity simulation
- Two MD encounters with prognostically similar, critically and terminally ill black and white elders and surrogates
- Identical treatment preferences
- Verbal communication scores did not differ
- Non-verbal communication lower with black than white patients
  - Time
  - Open vs closed posture
  - Touch
  - Physical proximity



- Cultural rura, 1, etc
- Group: Jene You are not responsible mal, Jue collar, etc for your background,
- utic but etc
- you *are* responsible for examining its impact on
- > Newspapers, you cial media

# Keep in mind

Members of the dominant group don't see themselves as "bad guys" and treating them as if they are is likely to meet even more resistance

- May not even see themselves as members of a group, but as individuals
- See their culture, language, values, etc. as THE culture, language, values, etc.
- > Find the culture of the non-dominant group as inferior
- Exhibit a sense of entitlement
- Deny differences
- May be offended and defensive when their culture is made visible.

## Manifestation

- ➤ Stereotype = Idea: widely held, oversimplified
- ➤ Prejudice = Belief: opinion formed w/out thought or knowledge
- ➤ Discrimination = Behavior: acting in line with stereotype or prejudice

## Structural Bias

"A tendency for the procedures and practices of particular institutions to operate in ways which result in certain social groups being advantaged or favored and others being disadvantaged or devalued."

### Structural Bias



Occurs as a result of the <u>task and reward</u> <u>structures</u> within an organization

The dominant culture assigns both the tasks, the metrics and the rewards

Based upon assumptions, values, goals and aspirations held by institutions and fields.

## Structural Bias



"I'll recommend your book if you recommend mine."

CartoonStock.com

- Impact factor of publications; # of grants
- Less cited at disadvantage; bias in grant making dooms from the outset
- "Grand Old Man" endorsement
- Ivy-centrism the pedigree trap
- Values change over time
  - "Excellence" defined in 1960, looks quite different than as defined today.

# Structural Bias - Impact

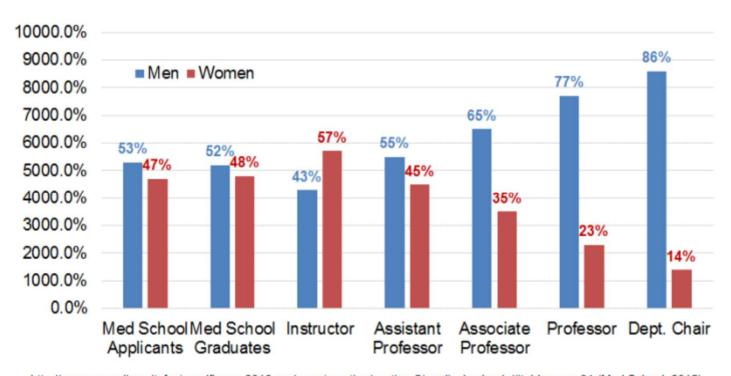
- Candidates for senior positions may be identified through informal networks. This may disadvantage qualified women and UR academics, who are less likely to be part of these networks.
- Structures designed for the dominant group can leave those in non-dominant groups in career limbo.



"Limbo as such has been phased out, but we'll be keeping you on hold for an unspecified amount of time."

### U.S. Women Faculty in Science - 2016

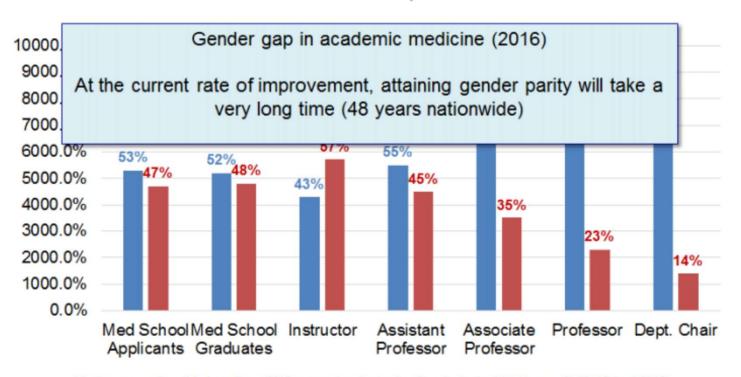
#### Clinical and Basic Science Departments Combined



http://www.aamcdiversityfactsandfigures2016.org/report-section/section-5/medical-schools/#tablepress-31 (Med School, 2015)

### U.S. Women Faculty in Science - 2016

#### Clinical and Basic Science Departments Combined



http://www.aamcdiversityfactsandfigures2016.org/report-section/section-5/medical-schools/#tablepress-31 (Med School, 2015)

# **A Clinical View**

### Racial/Ethnic Differences in Pain Treatment

- •Black patients with extremity injuries less likely to be given analgesics in the ER than white patients with similar injuries
- 43% of black patients vs. 26% of white patients with similar injuries received no pain meds (Knox Todd, JAMA, 1993)
- Similar results to LA study white patients with broken bones 64% more likely than Hispanic patients with similar fractures to receive pain meds in ER. (Knox Todd, Ann Int Med, Dec 99)
- Black patients presenting to the ED with joint dislocations less likely to receive analgesics or opioids; waited longer for treatment.

<sup>• (</sup>Tsai CL, Sullivan AF, Gordon JA, Kaushal R, Magid DJ, Blumenthal D, Camargo CA Jr., Am J Emergency Med, Am J Emerg Med. 2012)

# Unequal Treatment

IOM 2002 Report: Regarding health care, minorities are:

- ➤ less likely to be given appropriate cardiac medications or to undergo bypass surgery,
- less likely to receive kidney dialysis or transplants.
- ➤ less likely to receive the most sophisticated treatments for HIV infection
- more likely to receive less-desirable procedures, such as lower limb amputations for diabetes

### Race and Gender in Cardiac Care

- ➤ Eight SPs, same script, same mannerisms
- Computer survey included a video recorded interview of a patient with chest pain; designed to assess the physicians' management recommendations and judgment of the characteristics of the patient, and to record the demographic characteristics of the physicians.
- ➤ Race and sex of the patient affected the physicians' decisions about whether to refer patients with chest pain for cardiac catheterization, even adjusting for symptoms, the physicians' estimates of the probability of coronary disease, and clinical characteristics.
- ► Black women fared worst.



# How Does Bias Feel to a Patient?

Rachel Wiley – Poet



First, know thyself. Consider taking Harvard Implicit Associations Test - take several. Take responsibility for moderating your personal biases. Once you become aware of potential biases, you can interrupt biased thinking and mitigate discriminatory behaviors.

➤ Interact regularly with those toward whom you may show bias.

#### **➤ Slow down decision-making**

- ➤ Recognize your triggers
- ➤ Evaluate decisions. Conduct external review of decisions in order to detect and correct potentially biased results.
- Create structure. Develop clear metrics, try to identify sources of ambiguity, and standardize decision-making measures, when possible.
- Everyone makes mistakes. Use mistakes as an opportunity to better yourself and strengthen your relationship with others. Acknowledge and apologize.



"I'm recusing myself from this case."

CartoonStock.com

#### Draw attention to diversity:

- Department chairs are key attention to diversity can be interwoven throughout everything the department does
- Emphasize diversity in department reviews
- Promote identification and recruitment of women and UR for leadership positions

In Recruiting Candidates from diverse backgrounds:

- Use your network and everyone else's!
- Contact high-performing alumnae/alumni
- Encourage awareness of unconscious bias among search and selection committee members
- Practice conscious awareness about first impressions

**Why** do I like/not like this candidate?

- Identify and check biases about expectations and career accomplishments
- Speak up if you feel assessments or other practices or policies are biased

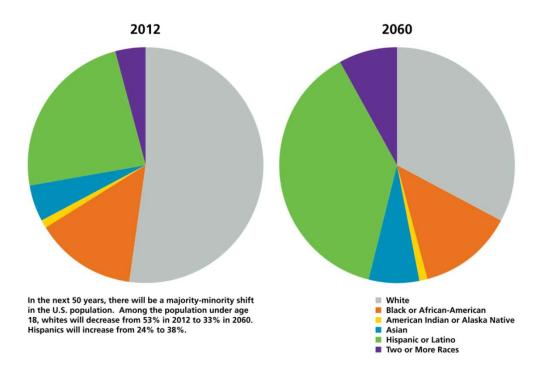
- Model ideal behaviors and create space for discussion of implicit bias with faculty and staff.
- ➤ Provide training in emotional intelligence.
- ➤ Provide training in the effective delivery of feedback
- > Provide training in interpersonal conflict management
- ➤ Provide training in inclusive/holistic application review



- Make an effort to meet colleagues different than you!
  Go outside your sphere to identify candidates
- > Don't bring a UR hire into a hostile, isolating culture.
- > Once new hire has arrived, provide attention to promote success.
  - Meaningful orientation to the institution
  - Help to identify a mentor/sponsor
  - Don't drown person in service. New UR hire should NOT chair the diversity committee.
  - Introductions in the academy AND in the community
  - Professional coaching
- Practice Inclusion

# Circling Back

FIGURE 8. U.S. Census Bureau projections for U.S. population under age 18 years, 2012 versus 2060.



Source: William H. Frey, Brookings Institution Analysis of U.S. Census Bureau Population Projections, released 12/12/2012.

# Circling Back

Table A-9: Matriculants to U.S. Medical Schools by Race, Selected Combinations of Race/Ethnicity and Sex, 2015-2016 through 2018-2019



The table below displays the self-identified racial and ethnic characteristics of women and men matriculants to U.S. medical schools from 2015-2016 through 2018-2019. In each row, a comma (,) is used to separate the race/ethnicity response options that matriculants selected; however, "Multiple Race/Ethnicity Not Listed Above" and "Unknown Race/Ethnicity" do not describe selectable response options. Please email datarequest@ aamc.org if you need further assistance or have additional inquiries.

Matriculants	2015-2016		2016-2017*			2017-2018			2018-2019			
Selected Combinations of Race/Ethnicity	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
American Indian or Alaska Native Only	31	24	55	25	29	54	21	21	42	22	17	39
American Indian or Alaska Native, Black or African American	4	4	8	3	4	7	3	6	9	3	12	15
American Indian or Alaska Native, White	50	48	98	38	43	81	45	52	97	49	57	106
Asian Only	2,066	2,029	4,095	2,170	2,305	4,475	2,118	2,363	4,481	2,191	2,595	4,786
Asian, Black or African American	14	13	27	25	16	41	24	25	49	20	21	41
Asian, White	153	195	348	181	233	414	202	237	439	193	251	444
Black or African American Only	556	793	1,349	581	916	1,497	572	932	1,504	604	936	1,540
Black or African American, White	32	35	67	46	45	91	29	43	72	45	63	108
Hispanic, Latino, or of Spanish Origin Only	692	628	1,320	696	639	1,335	705	678	1,383	680	669	1,349
Hispanic, Latino, or of Spanish Origin, Black or African American	26	39	65	34	44	78	31	53	84	37	47	84
Hispanic, Latino, or of Spanish Origin, White	248	222	470	279	323	602	321	317	638	345	336	681
Native Hawaiian or Other Pacific Islander Only	10	7	17	7	6	13	7	7	14	9	14	23
White Only	5,776	4,793	10,569	5,693	5,132	10,825	5,487	5,095	10,582	5,442	5,338	10,780
White, Other	62	56	118	115	98	213	97	73	170	132	83	215
Other	265	232	497	187	172	359	210	178	388	201	179	380
Multiple Race/Ethnicity Not Listed Above	119	140	259	163	168	331	162	178	340	155	195	350
Unknown Race/Ethnicity	498	438	936	165	175	340	351	408	759	188	205	393
Non-U.S. Citizen and Non-Permanent Resident	164	165	329	143	126	269	131	144	275	138	142	280
Total Matriculants	10,766	9,861	20,627	10,551	10,474	21,025	10,516	10,810	21,326	10,454	11,160	21,614

<sup>\*</sup>During the 2016 application cycle, a technical malfunction in the collection of race/ethnicity data necessitated a request that applicants review and re-submit responses to the race/ethnicity question in their AMCAS applications. No applicants were asked to review this question prior to or after 2016.

Note: The "Non-U.S. Citizen and Non-Permanent Resident" category may include students with unknown citizenship. Matriculants who declined to report sex are not reflected.

Each academic year includes applicants and matriculants that applied to enter medical school in the fall of the given year. For example, academic year 2018-2019 represents the applicants and matriculants that applied to enter medical school during the 2018 application cycle.

# Circling Back

#### Table 8: U.S. Medical School Faculty by Sex and Race/Ethnicity, 2017



The table below displays the number of full-time faculty at all U.S. medical schools as of December 31, 2017 by sex and race/ethnicity. To allow for unduplicated counts of faculty, the "Multiple Race – Hispanic" break-out includes all faculty who are reported as Hispanic and at least one other race/ethnicity. The "Multiple Race – Non-Hispanic" break-out includes all faculty who are reported as more than one race/ethnicity, but who are not reported as Hispanic.

Race/Ethnicity	Male	Female	Unreported	Total
American Indian or Alaskan Native	151	114	0	265
Asian	19,561	14,194	29	33,784
Black or African American	2,644	3,558	5	6,207
Hispanic, Latino, or of Spanish origin	3,278	2,399	3	5,680
Native Hawaiian or Other Pacific Islander	85	56	0	141
White	68,853	43,976	73	112,902
Other	806	640	1	1,447
Multiple Race - Hispanic	2,247	1,752	5	4,004
Multiple Race - Non-Hispanic	2,038	1,403	4	3,445
Unknown	3,828	4,042	112	7,982
Total	103,491	72,134	232	175,857

Source: AAMC Faculty Roster, December 31, 2017 snapshot, as of December 31, 2018.

# Privilege

- **≻**Own it.
- ➤ Be cognizant of the spaces where you have privilege
- ➤ Add your voice to others who lack privilege in those spaces
- Leverage your privilege to work for *inclusion*, *equity* and *justice*.

### A Few Resources

- The Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University has provided an annual overview of the science of implicit bias since 2013.
- ➤ Project Implicit at Harvard University provides an online implicitassociation test for individuals to measure their implicit attitudes and stereotypes.

https://implicit.harvard.org/implicit

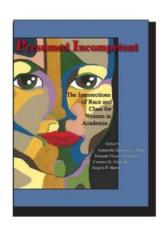


Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering

Committee on Maximizing the Potential of Women in Academic Science and Engineering, National Academy of Sciences, National Academy of Engineering, and Institute of Medicine

ISBN: 0-309-65454-8, 346 pages, 6 x 9, (2006)

This PDF is available from the National Academies Press at: http://www.nap.edu/catalog/11741.html



#### **Presumed Incompetent:**

The Intersections of Race and Class for Women in Academia

Edited by: Gabriella Gutiérrez y Muhs Yolanda Flores Niemann Carmen G. González Angela P. Harris

Utah State University Press, 2012 "It's not at all hard to understand a person; it's only hard to listen without bias."

— Criss Jami, Killosophy



# Questions?

Acknowledgements:

COOK ROSS INC.

Ann Thompson, MD, MHCPM