



Tomorrow's Doctors, Tomorrow's Cures®

Understanding Unconscious Bias in the Health Professions and How to Mitigate It

Diana Lautenberger, M.A.T.
Director, Faculty and Staff Research
AAMC

Learn

Serve

Lead



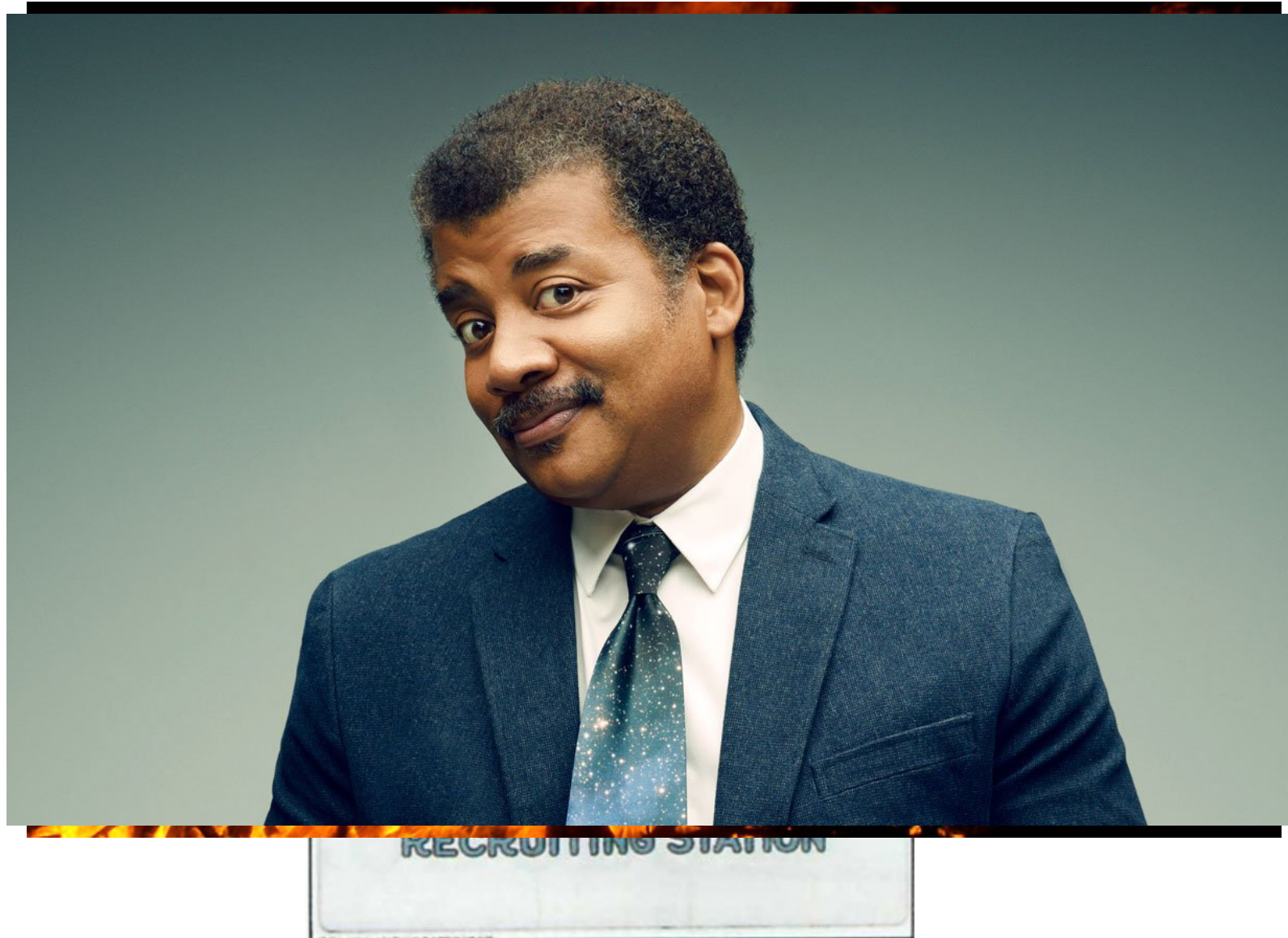
Association of
American Medical Colleges

Learning Objectives

- Understanding the filters through which one views and interprets oneself and others;
- Identifying patterns in ourselves for evaluating, assessing, and working with other people; and
- Mitigating bias to improve individual and collective decision-making abilities by recognizing when bias may be playing a negative role.

Terminology and Research

Implicit vs Explicit



What is Unconscious/Implicit Bias?

Unconscious bias, also known as implicit bias, refers to attitudes or stereotypes that are **outside our awareness** but nonetheless **affect our understanding, our interactions, and our decisions.**

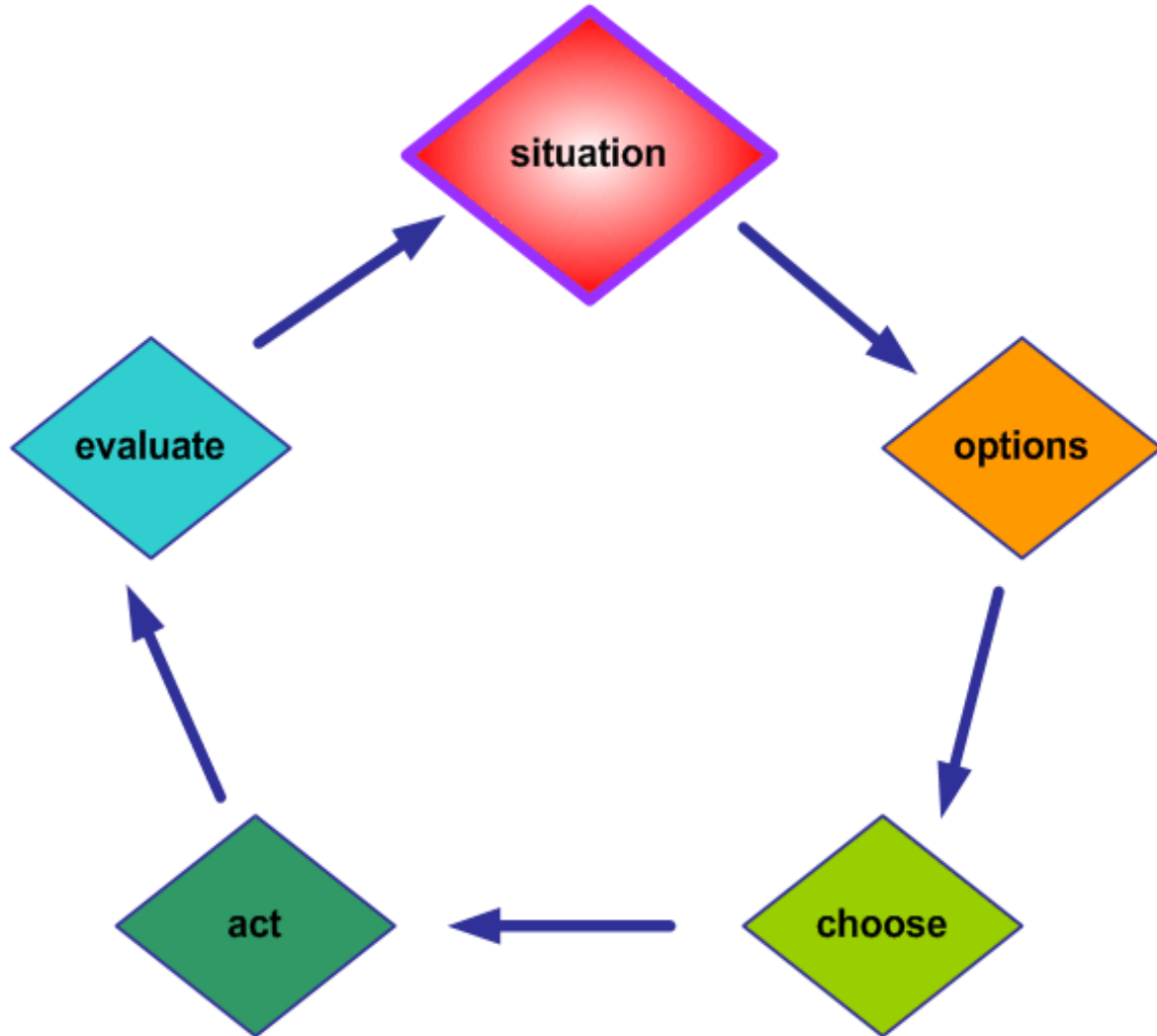
Source: Association of American Medical Colleges. (2017). *Unconscious Bias in Academic Medicine: How the Prejudices We Don't Know We Have Affect Medical Education, Medical Careers, and Patient Health*. Washington, DC. Available online at www.aamc.org/publications.

What is Explicit Bias?

Explicit bias is the traditional conceptualization of bias. With explicit bias, individuals are **aware of their prejudices and attitudes** toward certain groups. Positive or negative **preferences for a particular group are conscious.**

Source: Department of Justice. (2015). *Understanding Bias: A Resource Guide*. Washington, DC. Available online at <https://www.justice.gov/crs/file/836431/download>.

Biases Appear in Many Decision-making Processes



- Recruitment
- Hiring
- Performance evaluations
- Promotion
- Consideration for leadership positions

E-mail Response Times

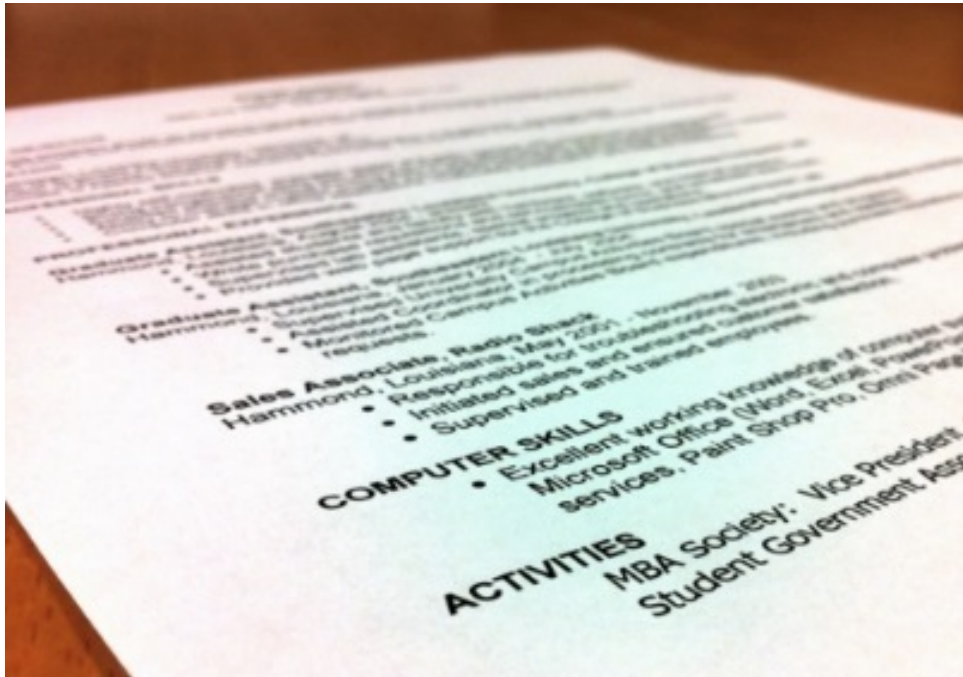
Temporal Distance and Discrimination: an Audit Study in Academia (2012)



- 6,548 professors contacted.
- Prospective doctoral students seeking to schedule a meeting either that day or in 1 week.
- Perceived White males were granted access to faculty members 26% more often than perceived women and minorities (Black, Hispanic, Indian, or Chinese).

Interview Opportunities

Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination (2004)



- Boston and Chicago job postings.
- White names received 50% more callbacks.
- Uniform discrimination across occupations and industries.

Interviewer and Interviewee Behavior

The Role of Interviewers' and Applicants' Implicit and Explicit Stereotypes in Predicting Women's Job Interview Outcomes (2015)



- Female applicants' higher implicit bias predicted lower performance.
- Male interviewers' implicit bias impaired female applicants' performance through lower evaluations by the interviewer.

Pain Assessment

Racial Bias in Pain Assessment (2016)

- Blacks age more slowly than whites.
- Blacks' nerve endings are less sensitive than whites.
- Black people's blood coagulates more quickly than whites.
- Whites have larger brains than blacks.
- Blacks' skin is thicker than whites.
- Whites have a more efficient respiratory system than blacks.
- Black couples are significantly more fertile than white couples.
- Blacks have stronger immune systems than whites.

The Effect of Race and Sex on Physicians' Recommendations for Cardiac Catheterization

“Men and whites were significantly more likely to be referred than women and blacks.”

Significant Health Disparities Exist In...



Diversity and Inclusion = Innovation and Productivity

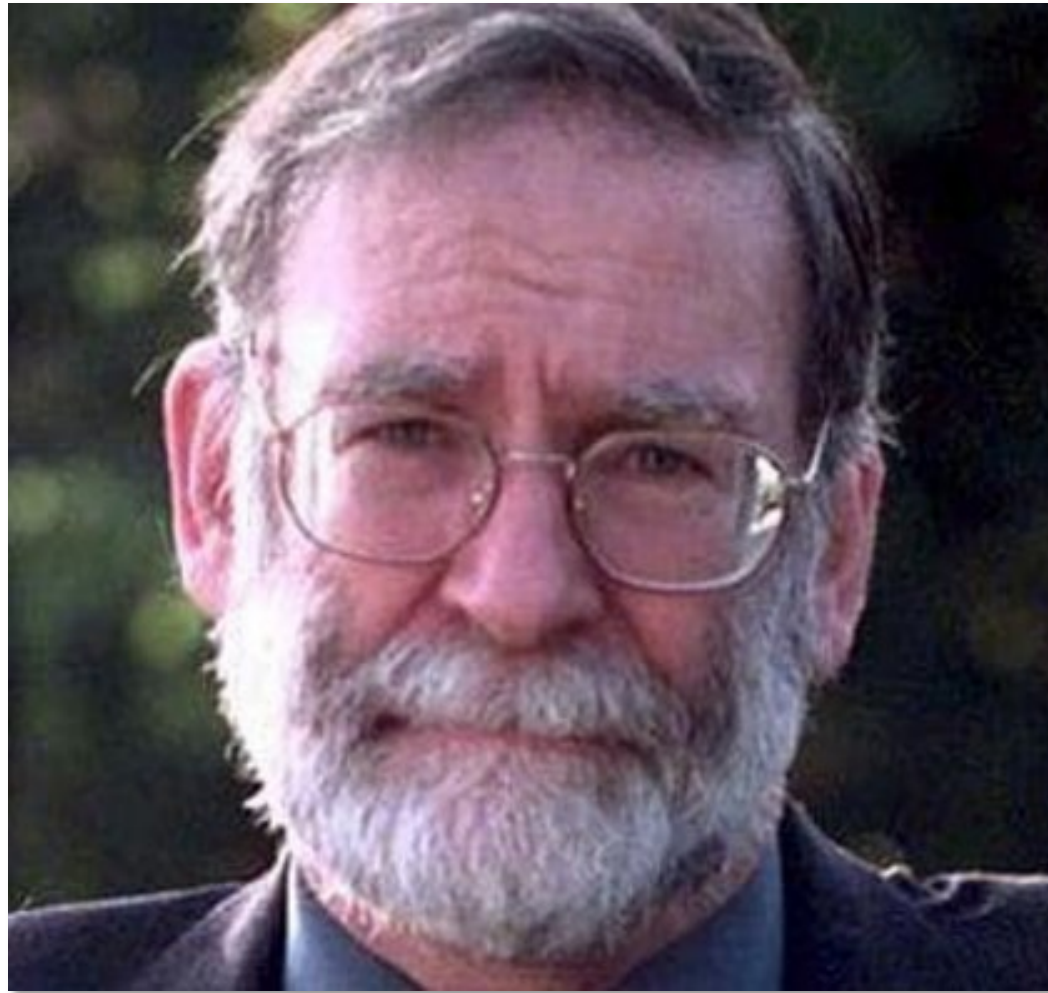
Identity diversity among intelligent people on a team contributes more to effective problem-solving than a team comprised of the best-performing, intelligent people without identity diversity.



Studies have shown that companies that achieve diversity in their management and on their corporate boards attain better financial results, on average, than other companies.

**As you look at each slide,
note the feelings, judgments,
and reactions that emerge.**









As you looked at these images, what came to mind?



Gender

Skin tone

Ethnicity

Age

Setting

**What
patterns do
you notice?**

**Facial
expression**

**Body
posture**

Body type

Clothing

John Fetterman



- Mayor of Braddock, PA (a suburb of Pittsburgh) – the tattoo on his arm is the zip code!
- Has a Master's degree in Public Policy from Harvard
- Served in the AmeriCorps
- Received international media attention for the economic revitalization programming he started in his community

Harold Shipman MD

- General Practitioner
- Britain's most prolific serial killer.
- Killed between 215 and 260 patients from 1975-1998.



Oxana Federova, PhD



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

Mae Jemison, MD

- Physician
- Professor
- U.S. Astronaut



Height **Sexual**
Appearance **Orientation** **Name**
Race **Education**
Disability **Gender**
Accent **Hand**
Skin Tone **Dominance**
Communication **Weight** **Religion**
Style **Age**

**Which
biases are
ours?**

Diving Deeper: The Origin and Science of Bias

What is Unconscious Bias?

Mental associations without:

- **Awareness**
- **Intention**
- **Control**



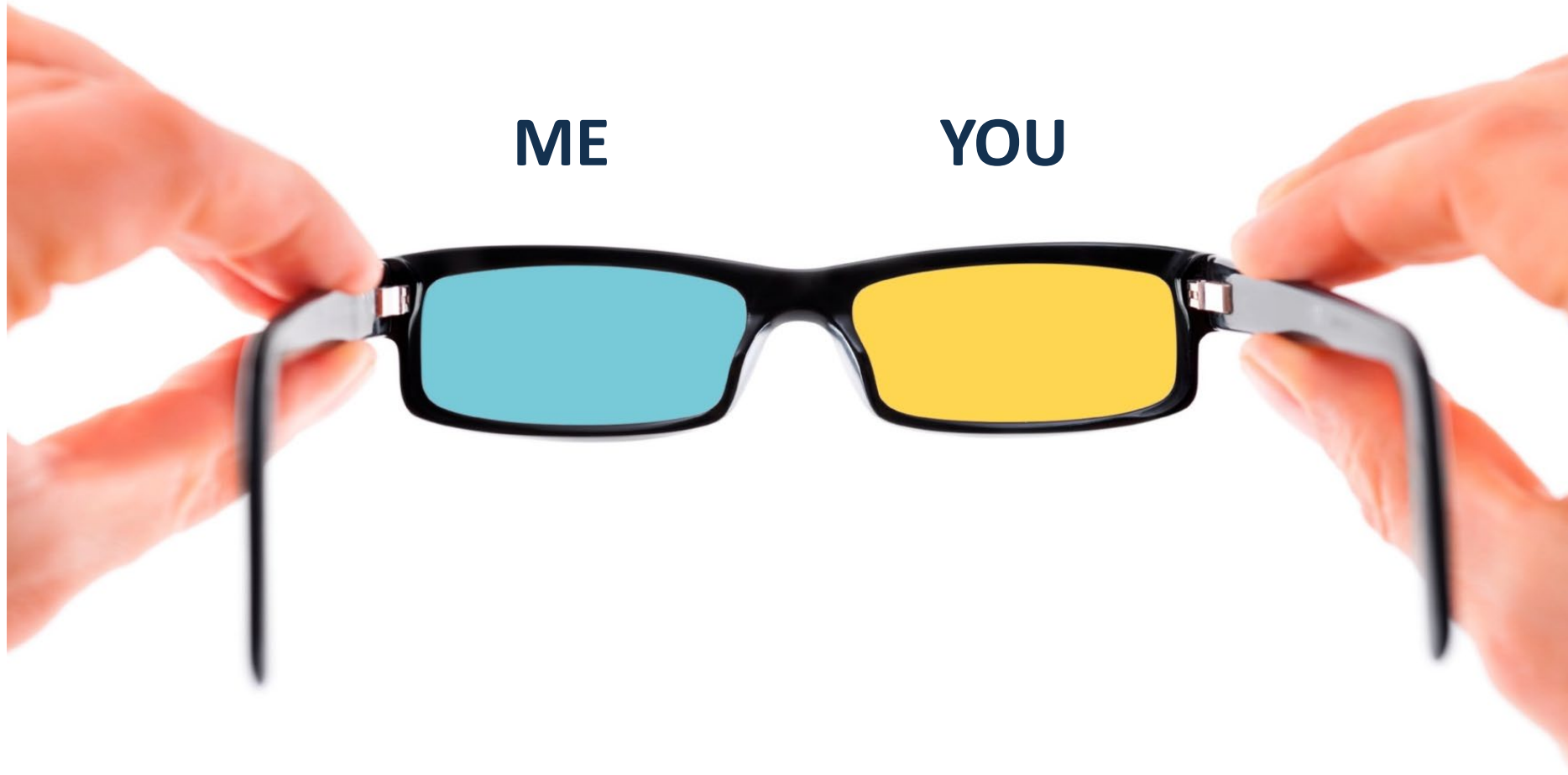
These often conflict with our conscious attitudes, behaviors, and intentions.

What Function Does Bias Serve?



- Ensures our survival
- Part of automatic survival tendency
- Natural tendency to feel comfortable with people like us

Seeing Our Social Lens



Culture

Group

Individual

Institutional



What We See...

Fun

Exciting

Exhilarating



Scary

Nauseating

Dangerous

What is Really There...

**Welded
steel**

**Bright
paint**



**Nuts and
Bolts**

**Curved
design**

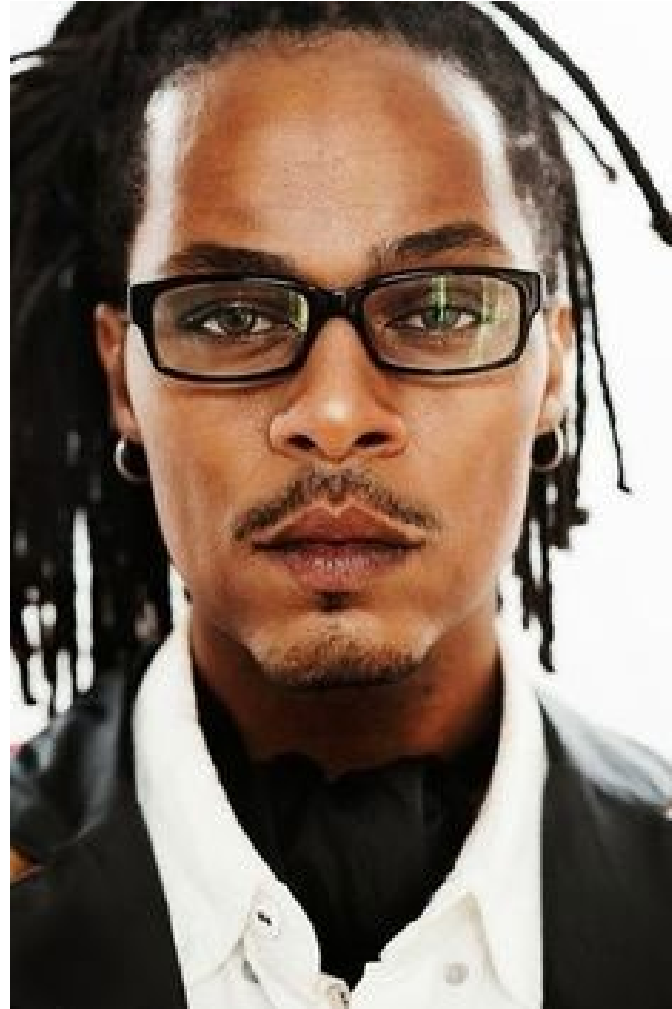
What We See...

Well Groomed

Intelligent

Expressive

Stoic



One of “those people”

Socially Inept

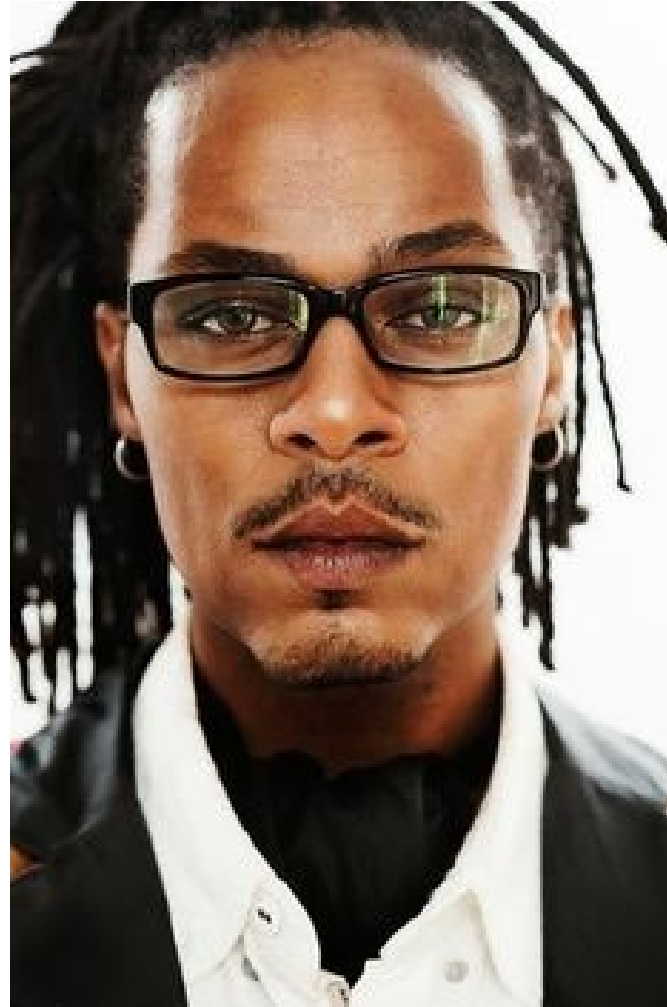
Rebellious

Unfriendly

What is Really There...

Hair

Earrings

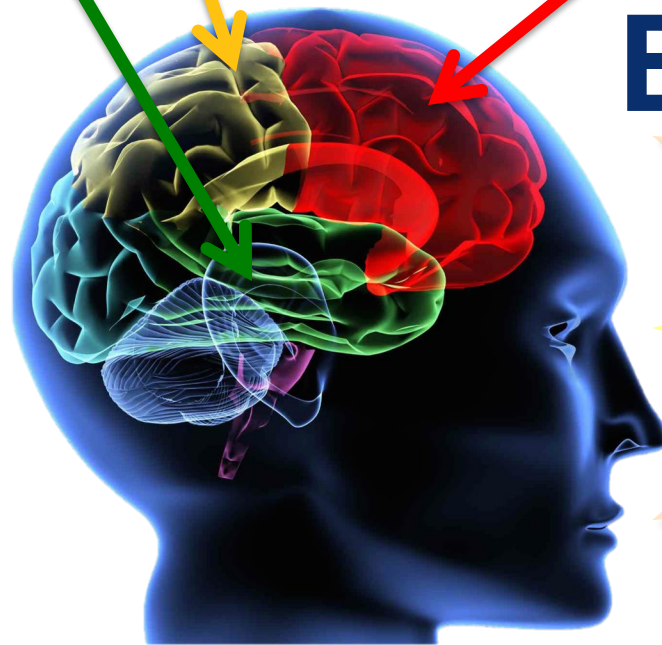


Glasses

Neutral
Expression

Fast
(Emotional)
Brain

Slow
(Thinking)
Brain



Background

Catalyzing
person or
circumstance

Perceptions

Source: T. Norretranders, The User Illusion. Trans. J. Sydenham (New York: Viking, 1998), cited in Timothy Wilson, Strangers to Ourselves: Discovering the Adaptive Unconscious (Cambridge, Mass.: Belknap Press of Harvard University Press, 2002), 24.

Interpretations

Preferences

Selective Attention

11 million
pieces of
information at
any one time



40-50 pieces
of information get
absorbed

“...being excluded from a group triggers activity in the same regions of the brain associated with physical pain.”



Kipling D. Williams, Purdue University

Internalized Bias



Source: CNN. 2010. "Study shows how children view race bias." Anderson Cooper 360°. Available online at: .

The Priming Effect



Medical school applicants interviewed on rainy days received scores equivalent to a 10% lower mark on the MCAT than those interviewed on sunny days.

What We See



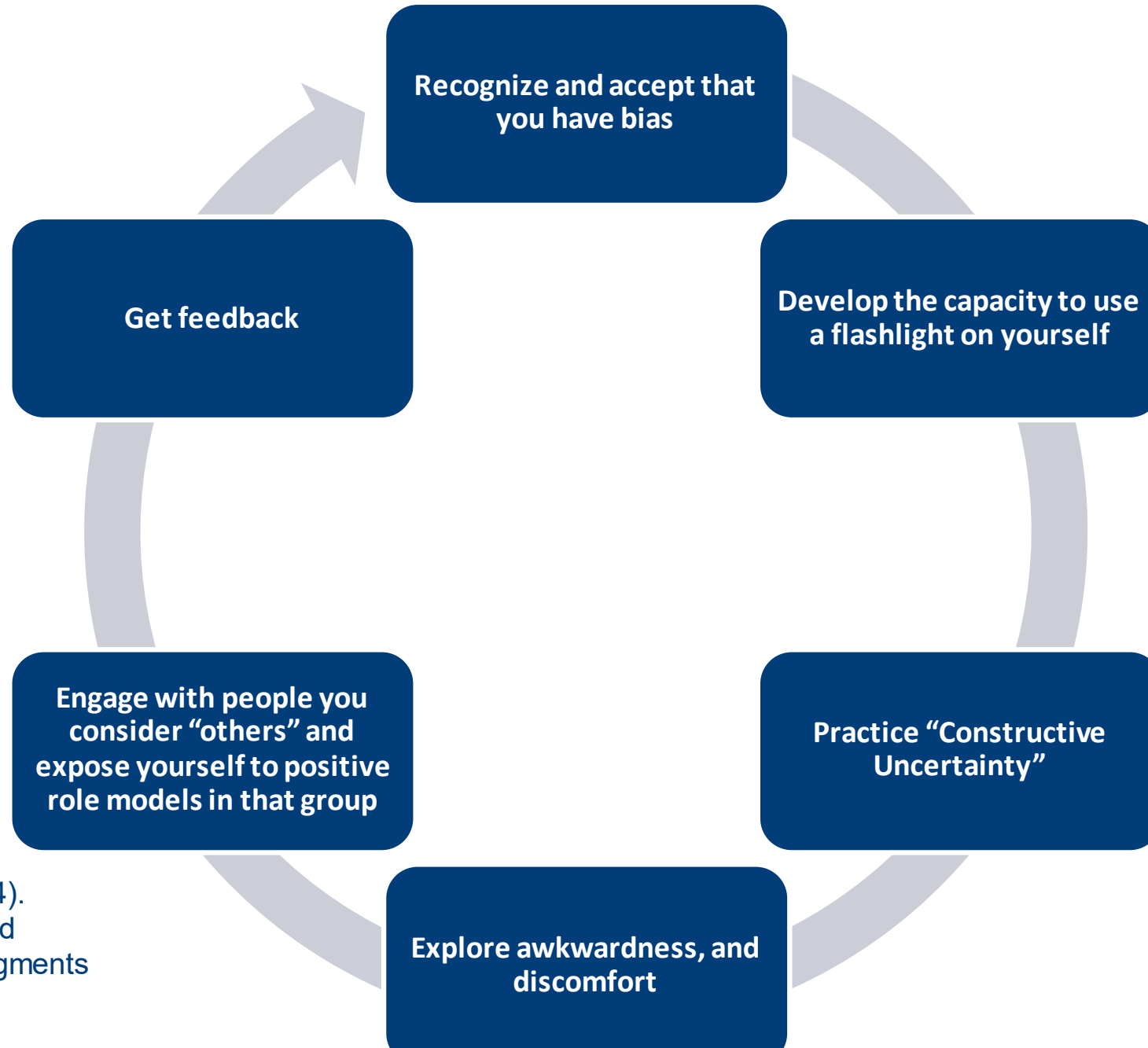
What is there...



Members, Society of Black Academic Surgeons

Bias Mitigation

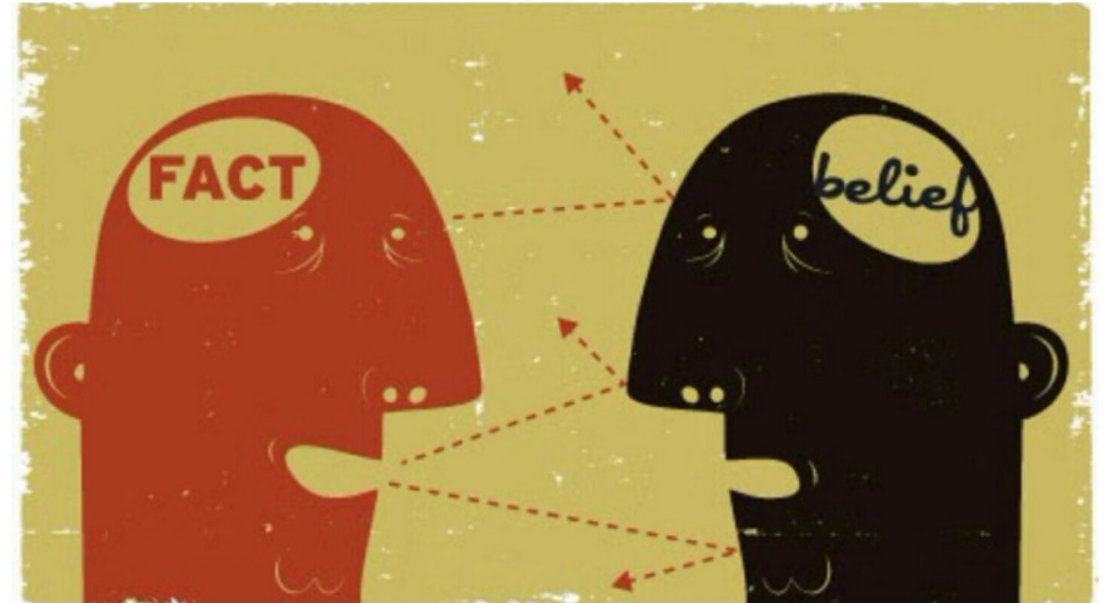
Process to Mitigate Biases



Source: Howard Ross. (2014).
Everyday Bias: Identifying and
Navigating Unconscious Judgments
in Our Daily Lives.

Mitigating Bias in Decision Making

- Use a process
- Use a rubric/criteria
- Inject objectivity (masking names, pictures, etc.)
- Get diverse perspectives
- Avoid the “Good Feeling”
- Encourage dissent – avoid groupthink!



Decision-Making Biases to Avoid

- Anchoring bias
- Availability heuristic
- Bandwagon effect
- Blind-spot bias
- Choice-supportive bias
- Clustering illusion
- Confirmation bias
- Conservatism bias
- Information bias
- Ostrich effect
- Outcome bias
- Overconfidence
- Placebo effect
- Pro-innovation bias
- Recency
- Salience
- Selective Perception
- Stereotyping

1. Anchoring bias.

People are **over-reliant** on the first piece of information they hear. In a salary negotiation, whoever makes the first offer establishes a range of reasonable possibilities in each person's mind.



2. Availability heuristic.

People **overestimate the importance** of information that is available to them. A person might argue that smoking is not unhealthy because they know someone who lived to 100 and smoked three packs a day.



3. Bandwagon effect.

The probability of one person adopting a belief increases based on the number of people who hold that belief. This is a powerful form of **groupthink** and is reason why meetings are often unproductive.



4. Blind-spot bias.

Failing to recognize your own cognitive biases is a bias in itself. People notice cognitive and motivational biases much more in others than in themselves.



5. Choice-supportive bias.

When you choose something, you tend to feel positive about it, even if that **choice has flaws**. Like how you think your dog is awesome — even if it bites people every once in a while.



6. Clustering illusion.

This is the tendency to **see patterns in random events**. It is key to various gambling fallacies, like the idea that red is more or less likely to turn up on a roulette table after a string of reds.



7. Confirmation bias.

We tend to listen only to information that confirms our **preconceptions** — one of the many reasons it's so hard to have an intelligent conversation about climate change.



8. Conservatism bias.

Where people favor prior evidence over new evidence or information that has emerged. People were **slow to accept** that the Earth was round because they maintained their earlier understanding that the planet was flat.



9. Information bias.

The tendency to **seek information when it does not affect action**. More information is not always better. With less information, people can often make more accurate predictions.



10. Ostrich effect.

The decision to **ignore dangerous or negative information** by "burying" one's head in the sand, like an ostrich. Research suggests that investors check the value of their holdings significantly less often during bad markets.



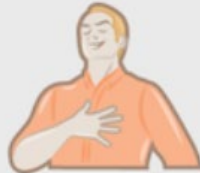
11. Outcome bias.

Judging a decision based on the **outcome** — rather than how exactly the decision was made in the moment. Just because you won a lot in Vegas doesn't mean gambling your money was a smart decision.



12. Overconfidence.

Some of us are **too confident about our abilities**, and this causes us to take greater risks in our daily lives. Experts are more prone to this bias than laypeople, since they are more convinced that they are right.



Other Factors to Consider

- **Disability**
- **Competence/Warmth**
- **Location**
- **Accent**
- **“Good Feeling”**
- **Introversion**
- **Extroversion**
- **Weight**
- **Name**
- **Gender Identity**
- **Gender Expression**
- **Unique Mannerisms**
- **Performance vs Potential**
- **Distracting Visual Content**

Unconscious Bias in Academic Medicine



THE OHIO STATE UNIVERSITY
KIRWAN INSTITUTE FOR THE
STUDY OF RACE AND ETHNICITY



Tomorrow's Doctors, Tomorrow's Cures®

Proceedings of the Diversity and Inclusion Innovation Forum: Unconscious Bias in Academic Medicine

How the Prejudices We Don't Know We Have Affect Medical
Education, Medical Careers, and Patient Health

Learn
Serve
Lead

Association of
American Medical Colleges

Chapter 1 Medical School Admissions

Chapter 2 Undergraduate Medical Education

Chapter 3 Resident Recruitment and Selection

Chapter 4 Faculty Recruitment, Selection, and Hiring

Chapter 5 Faculty Mentoring

Chapter 6 Faculty Advancement, Promotion, and Tenure

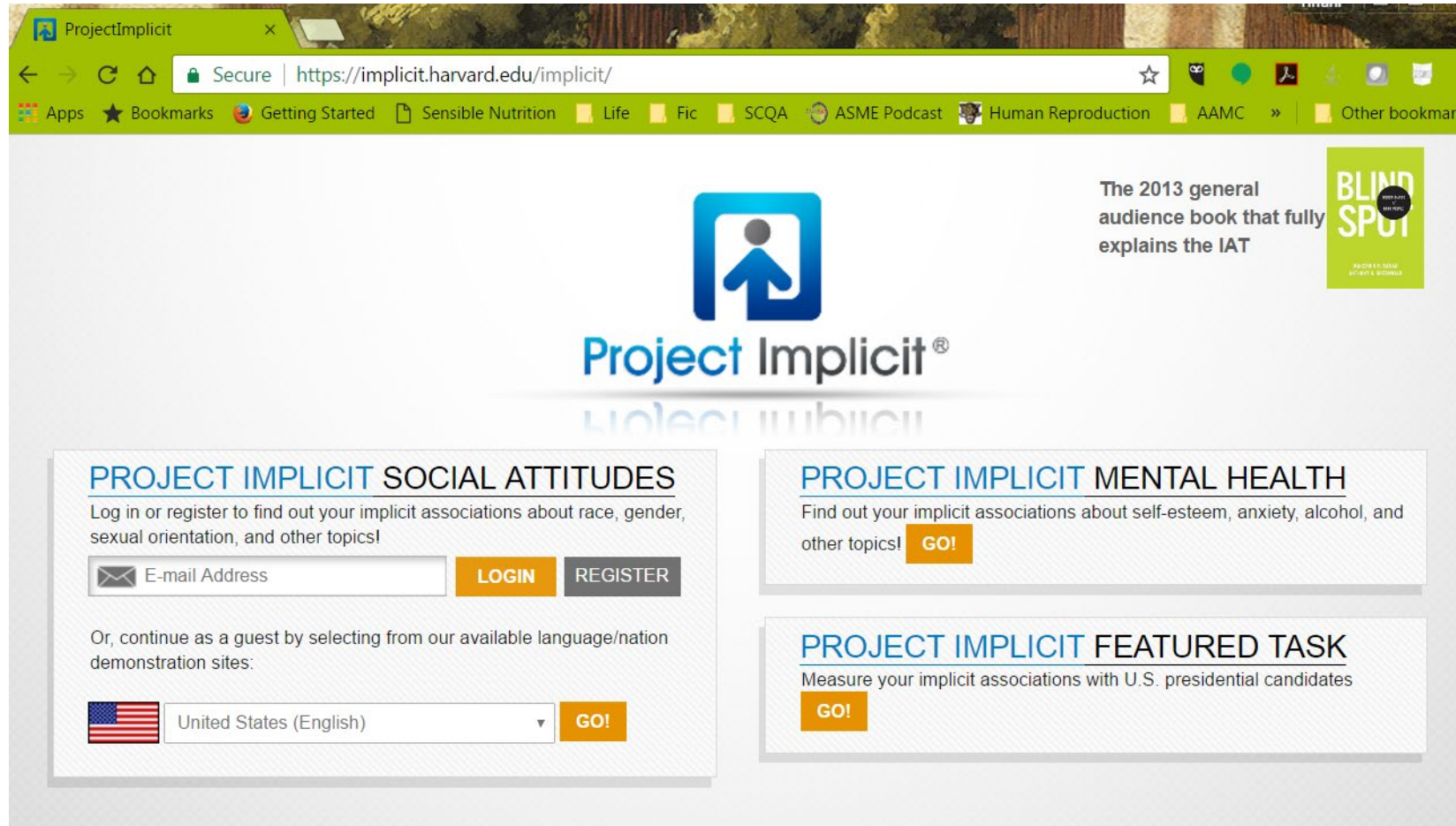
Chapter 7 Patient Care

Chapter 8 Unconscious Bias Interventions

www.aamc.org/publications



Implicit Association Test (IAT)




The screenshot shows the Project Implicit website in a web browser. The browser's address bar displays "https://implicit.harvard.edu/implicit/". The website features the Project Implicit logo, which consists of a blue square with a white stylized figure. Below the logo, the text "Project Implicit®" is visible. To the right of the logo, there is a promotional banner for "The 2013 general audience book that fully explains the IAT" with a book cover titled "BLIND SPOT". The main content area is divided into three sections: "PROJECT IMPLICIT SOCIAL ATTITUDES" with a login/register form, "PROJECT IMPLICIT MENTAL HEALTH" with a "GO!" button, and "PROJECT IMPLICIT FEATURED TASK" with a "GO!" button. The login/register form includes an "E-mail Address" input field, "LOGIN" and "REGISTER" buttons, and a section for selecting a language/nation with a dropdown menu set to "United States (English)" and a "GO!" button.

<https://implicit.harvard.edu/implicit/>

- Age
- Asian
- Weight
- Native
- Race
- Presidents
- Gender-Career
- Sexuality
- Skin-tone
- Disability
- Arab-Muslim
- Gender-Science
- Weapons

On-Demand AAMC Resources



Unconscious Bias:

What To Do About It in the Search and Recruitment Process

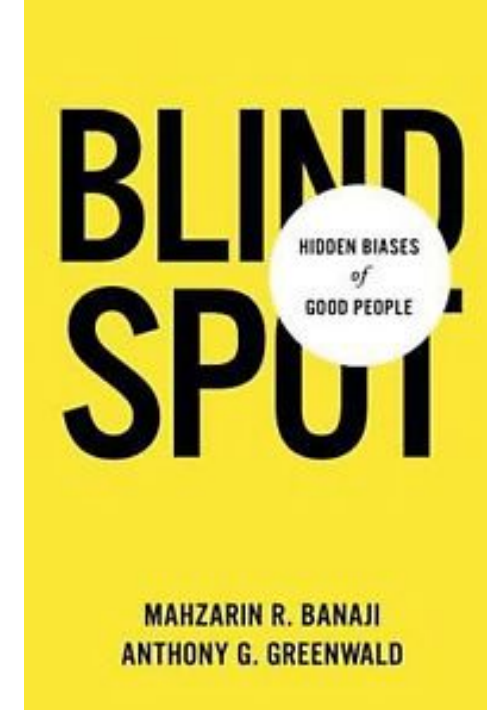
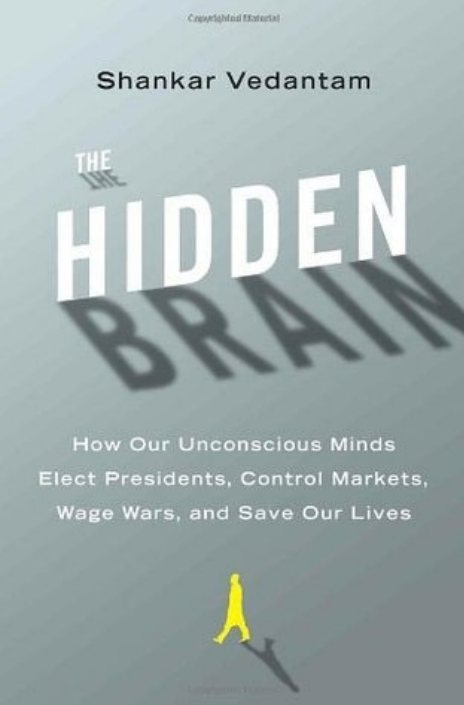
A Research Presentation for Search Committees in Academic Medicine

Slide 1 / 33 | Stopped

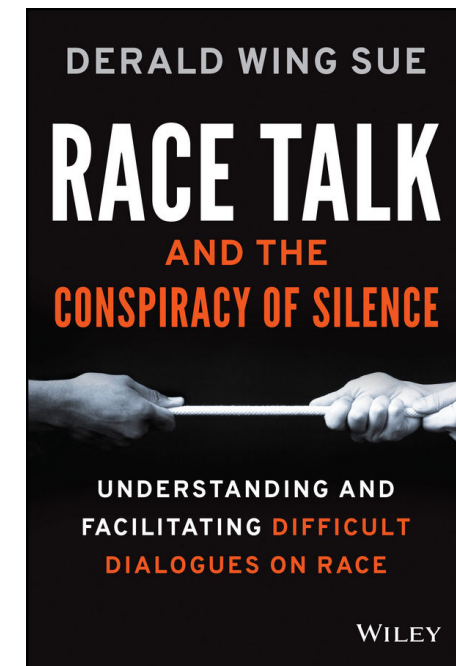
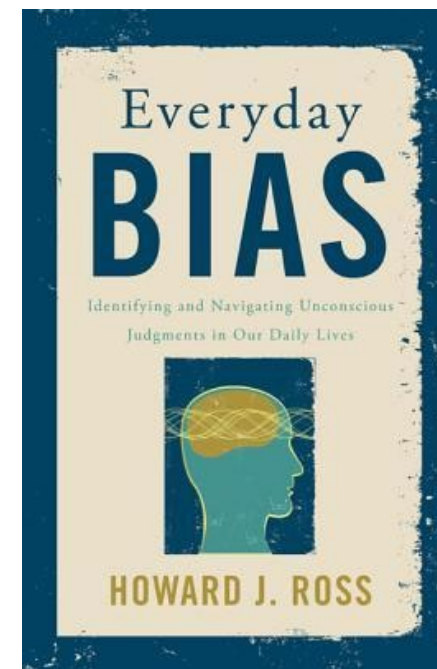
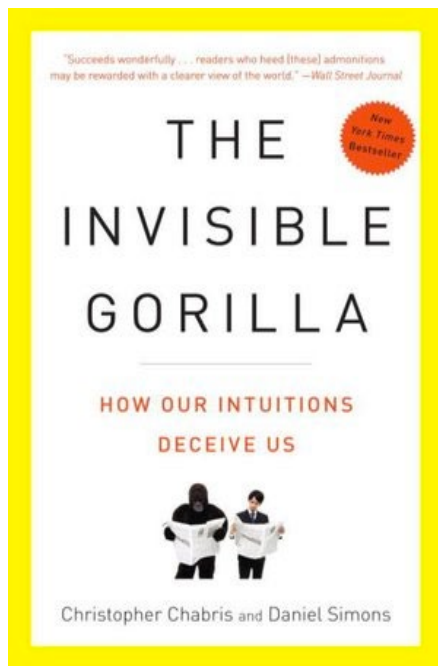
00:05 / 00:19

This slide is the first of 33 in a presentation. It features the AAMC logo at the top right. The title 'Unconscious Bias: What To Do About It in the Search and Recruitment Process' is in red and blue. Below it, the subtitle 'A Research Presentation for Search Committees in Academic Medicine' is in blue. A decorative graphic of a stylized caduceus is on the right. The bottom of the slide shows a presentation control bar with 'Slide 1 / 33 | Stopped' and a timer at '00:05 / 00:19'.





Also an NPR
podcast!



Questions?



Thank you!

Diana Lautenberger, MA
Director,
Medical School Operations
dlautenberger@aamc.org