

DC | HEALTH



Implicit Bias

DCRx: The DC Center for Rational Prescribing

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PRESENTER



Deliya Wesley, PhD, MPH
Scientific Director, Health Equity Research
MedStar Health Research Institute
Assistant Professor, Georgetown University School of Medicine

ADVISORS

Felise Milan, MD

Professor of Medicine

Director, Ruth L. Gottesman Clinical Skills Center

Director, Introduction to Clinical Medicine Programs

Albert Einstein College of Medicine



C. Annetta Arno, PhD, MPH

Director, Office of Health Equity

DC Health

Christopher King, PhD, MHSc, FACHE

Chair, Department of Health Systems Administration

Georgetown University

CONFLICTS OF INTEREST

None of the speakers or advisors of conflicts of interest to declare.





COURSE GOAL

Understand key concepts of implicit bias including the historical context, the underlying psychology that drives implicit associations and affects behavior, and apply this knowledge to effectively improve your clinical decisions and practices.

OVERVIEW

- **Module I: Introduction and Historical Context**
- **Module II: Implicit Bias in Action**
- **Module III: Self-Awareness and Assessment**
- **Module IV: Mitigating Bias and Debiasing Strategies**
- **Module V: Provider Scenarios and Reflections**

LEARNING OBJECTIVES

- **Module I: Introduction and Historical Context**
 - Define implicit bias and understand the difference from conscious processes
 - Understand historical context for implicit bias
- **Module II: Implicit Bias in Action**
 - Understand what causes implicit bias and how bias affects behavior
 - Identify at least two clinical scenarios where implicit bias can adversely impact care
- **Module III: Self-Awareness and Assessment**
 - Examine the nature of your own biases
 - Reflect on the possible effects of your biases on yourself and others
- **Module IV: Mitigating Bias and Debiasing Strategies**
 - Describe at least 3 individual-level strategies to mitigate bias in a clinical context
 - Describe at least 2 organizational-level strategies to mitigate bias in a clinical context
- **Module V: Provider Scenarios and Reflections**
 - Describe at least 2 organizational-level strategies to mitigate bias

IMPORTANT INFORMATION



The video will progress at its own pace.



Do not attempt to speed up the video.



The post-test will only unlock after viewing the entire video.



The video can be paused and resumed later.

MODULE I:

DEFINITIONS AND HISTORICAL CONTEXT

DEFINING IMPLICIT BIAS

- Implicit Bias = Unconscious Bias
- Attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner
- Activated involuntarily without awareness
- **Not** controlled intentionally
- **Not** accessible through introspection

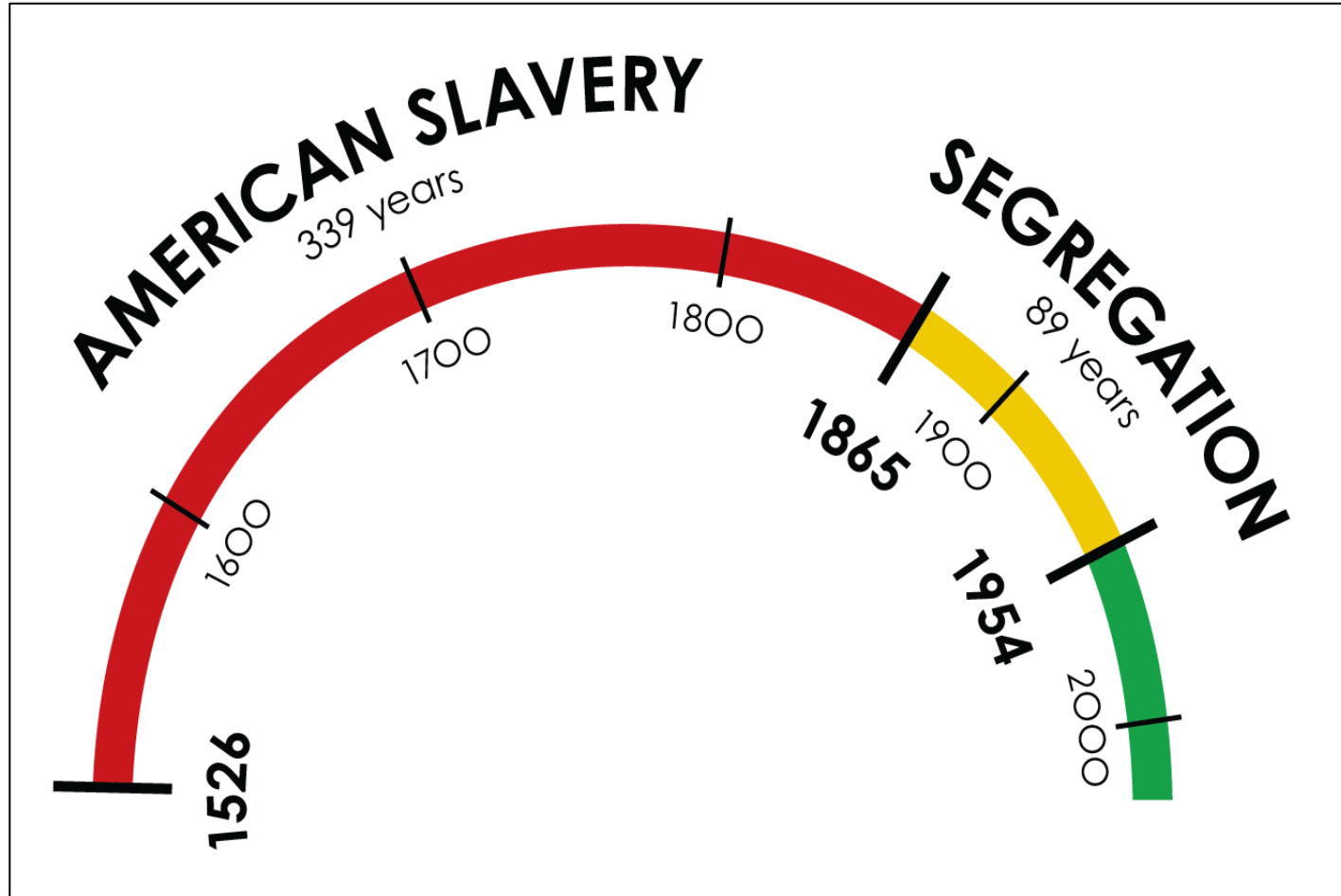


DEFINING IMPLICIT BIAS

- Formed over an individual's lifetime
 - Based on exposures
 - Based on messaging (direct and indirect)
- Causes us to have attitudes and feelings about others based on
 - Race
 - Ethnicity
 - Physical appearance
 - Age



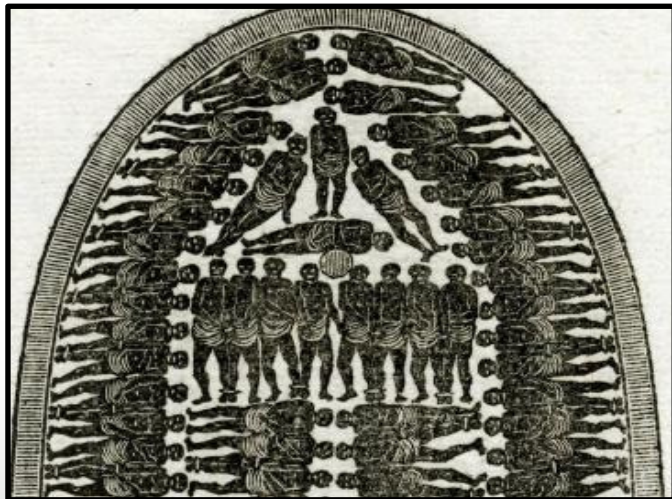
HISTORICAL CONTEXT



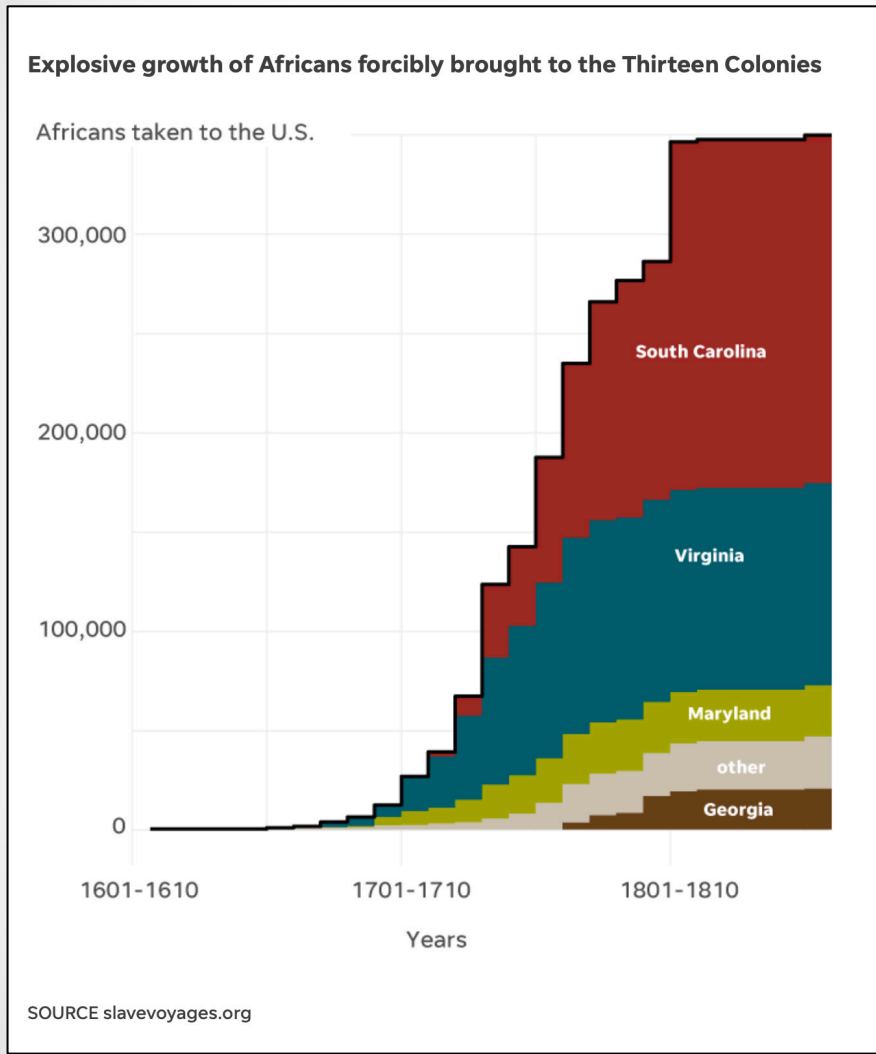
HISTORICAL CONTEXT: 1619 SLAVE TRADE



- Torn from families
- Sold for labor
- Physically abused
- Perceived as genetically inferior



HISTORICAL CONTEXT



1850: James Marion Sims and other physicians begin experimenting on the bodies of Black women

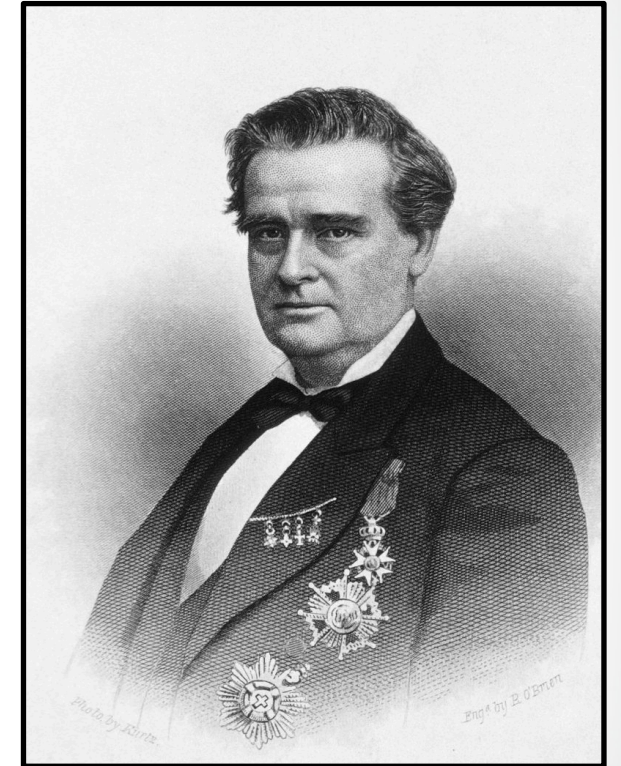
1807: The importation of humans becomes illegal, forcing Black women to procreate for the economic benefit of slave owners

THE FATHER OF GYNECOLOGY

James Marion Sims (1836-1883)

"His fame and fortune were a result of unethical experimentation with powerless Black women. Dr Sims, 'the father of gynecology', was the first doctor to perfect a successful technique for the cure of vesico-vaginal fistula, yet despite his accolades, in his quest for fame and recognition, he manipulated the social institution of slavery to perform human experimentations, which by any standard is unacceptable."

Journal of Medical Ethics



James Marion Sims (1836-1883)
"Father of Gynecology"

ANARCHA, BETSY, AND LUCY

First encounters with the medical system

- Suffered from vaginal fistulas
- Exposed to painful surgical experimentation; no anesthesia
- Anarcha endured up to 30 procedures

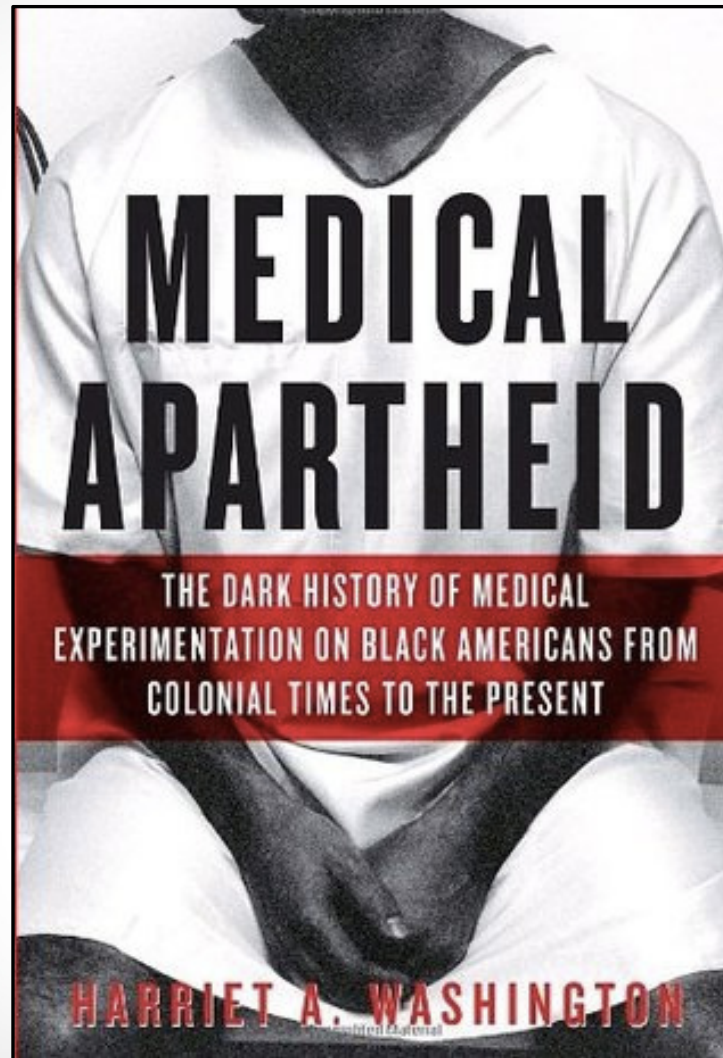


HISTORICAL ORIENTATION TO MEDICAL CARE

- Enslaved people were property
- When they were sick, their options for medical care were limited
- Medical providers perceived them as genetically different (Negro Medicine)
- Unethical experimental procedures were pervasive
- As a people, this was their orientation to the American medical community.

The effect of this legacy shows up today.

MEDICAL FALLACIES ABOUT BLACKS



In comparison to Whites, Blacks:

- Had thicker skin
- Faster blood coagulation
- Possessed higher pain tolerance
- Were predisposed to violence
- Had smaller brains
- Less respiratory capacity

PRESENT DAY EXAMPLES IN PAIN PRESCRIBING

- Blacks are systematically undertreated for pain relative to whites¹
 - Less likely to be given pain medications
 - If given, receive lower quantities
- Individuals with at least some medical training hold and may use false beliefs about biological differences between Blacks and whites to inform medical judgements
 - May contribute to disparity in pain assessment and treatment
 - Black patients found significantly less likely than whites to receive analgesics for extremity fractures in the ED (57% vs. 74%)²

1 Review: Racial and ethnic disparities in pain: causes and consequences of unequal care. Anderson KO, Green CR, Payne R J Pain. 2009 Dec; 10(12):1187-204.

2. Ethnicity and analgesic practice. Todd KH, Deaton C, D'Adamo AP, Goe L Ann Emerg Med. 2000 Jan; 35(1):11-6.

PRESENT DAY EXAMPLES IN PAIN PRESCRIBING

National Hospital Ambulatory Medical Care Survey (2015)

- Large cross-sectional study of patients aged <21 in the ED diagnosed with appendicitis³
- Black children significantly less likely to receive any pain medication for moderate pain and less likely to receive opioids for severe pain



Goyal MK, Kuppermann N, Cleary SD, Teach SJ, Chamberlain JM. Racial Disparities in Pain Management of Children With Appendicitis in Emergency Departments. *JAMA Pediatr.* 2015;169(11):996–1002. doi:10.1001/jamapediatrics.2015.1915

NO SHORTAGE IN HEADLINES...

Racial bias in pain as recommendations, and differences between

Kelly M. Hoffman^{a,1}, Sophie Trawalter^a, Jordan


^aDepartment of Psychology, University of Virginia, Charlottesville, VA 22908; and ^cDepartment of Public Health Sciences, Unive

Edited by Susan T. Fiske, Princeton University, Princeton, NJ,

HEALTH

Some medical students still think black patients feel less pain than whites

By IKE SWETLITZ / APRIL 4, 2016



APSTOCK

Black patients are systematically undertreated for pain, decades of research have shown. And a [study](#) published Monday sheds light on one factor that might contribute to this disparity.

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lottesville,

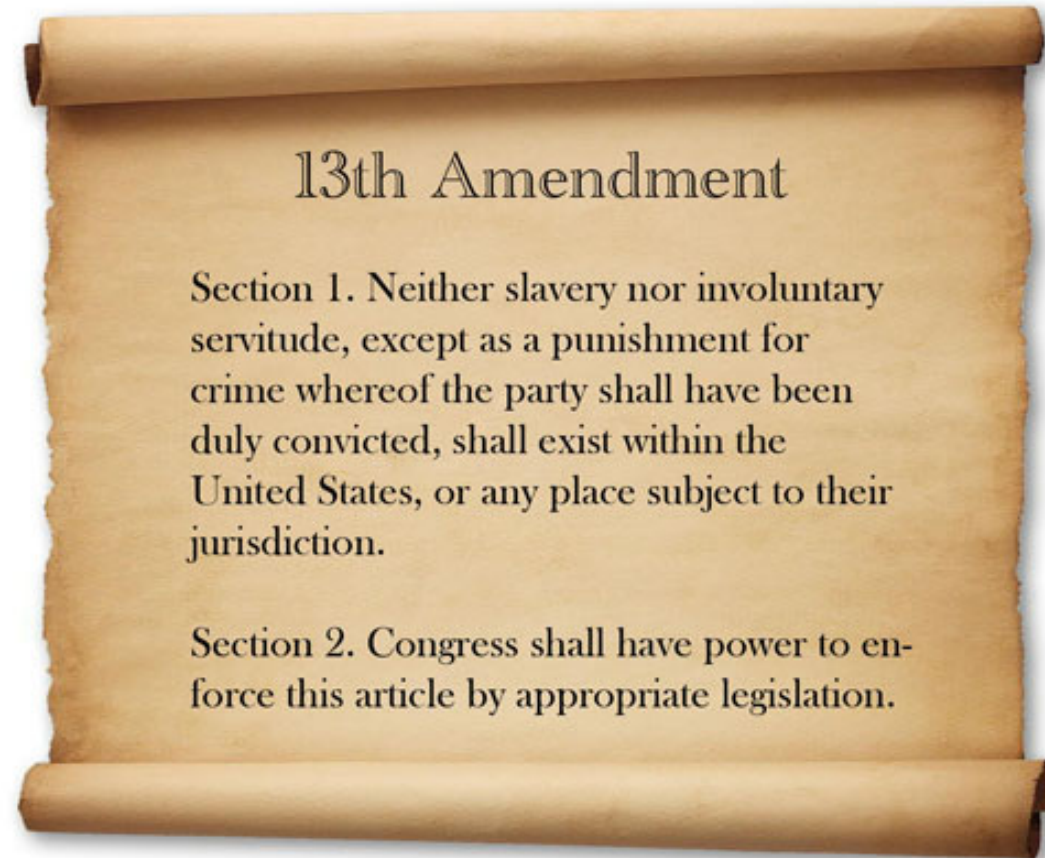
MYTHS OF INNATE RACIAL DIFFERENCES BETWEEN WHITE AND BLACK PEOPLE'S BODIES

[The study](#), published in the Proceedings of the National Academy of Sciences, could help illuminate one of the most vexing problems in pain treatment today: That whites are more likely than blacks to be prescribed strong pain medications for equivalent ailments.

Item	General	1 st year	2 nd year	3 rd year	Residents
Blacks age more slowly than white	23	21	28	12	14
Blacks' nerve endings are less sensitive than whites'	20	8	14	0	4
Black people's blood coagulates more quickly than whites	39	29	17	3	4
Whites have larger brains than blacks	12	2	1	0	0
Whites have a better sense of hearing than blacks	10	3	7	0	0
Blacks' skin is thicker than whites	58	40	42	22	25
Blacks have a more sensitive sense of smell than whites	20	10	18	3	7
Whites have a more efficient respiratory system than blacks	16	8	3	2	4
Black couples are significantly more fertile than white couples	17	10	15	2	7
Blacks are better at detecting movement than whites	18	14	15	5	11
Blacks have stronger immune systems than whites	14	21	15	3	4

Percentage of white participants endorsing beliefs about biological differences between blacks and whites. (Courtesy of PNAS/Hoffman et al)

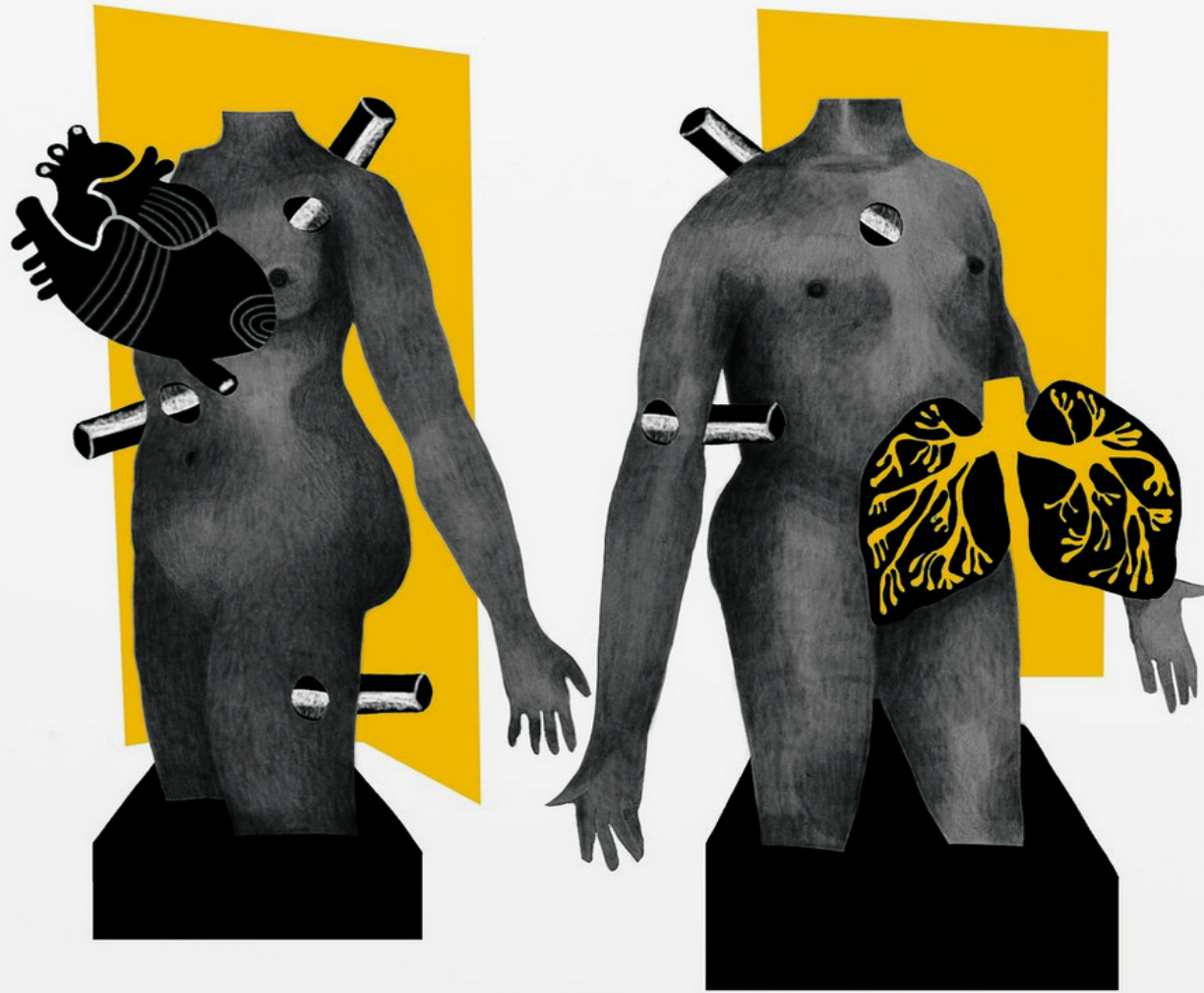
1865: 13th AMENDMENT ABOLISHES SLAVERY



13th Amendment

Section 1. Neither slavery nor involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction.

Section 2. Congress shall have power to enforce this article by appropriate legislation.



Myths about physical racial differences were used to justify slavery — and are still believed by doctors today.

By Linda Villarosa

AUG. 14, 2019

MODULE II:

IMPLICIT BIAS IN ACTION

WHAT CAUSES IMPLICIT BIAS?

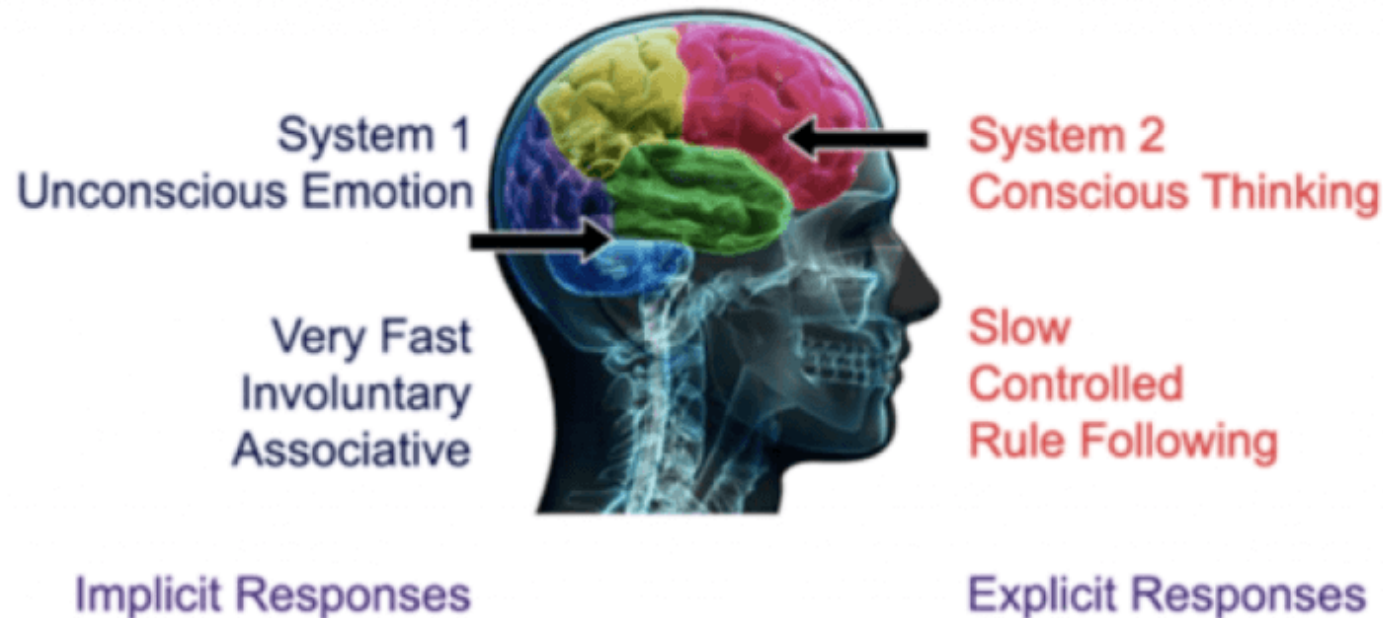
- Operates on an unconscious level
- Neuroscientists estimate that we are exposed to 11 million pieces of information at any one time
- Our brains are designed to handle ~40
- To improve efficiency, our brains take mental shortcuts and create pathways of association



HUMAN DECISION MAKING

Human Decision Making: System 1 vs. System 2

Two Decision Making Routes



It's the natural tendency of the brain to sift, sort, and categorize information about the world that leads to these implicit biases.

IMPLICIT BIAS IN ACTION: EXERCISES

Test A

RED	PURPLE	BLUE	GREEN	ORANGE
GREEN	RED	ORANGE	BLUE	PURPLE
BLUE	GREEN	PURPLE	ORANGE	RED
ORANGE	BLUE	RED	PURPLE	GREEN
PURPLE	ORANGE	GREEN	RED	BLUE

Test B

BLUE

GREEN

RED

ORANGE

PURPLE

PURPLE

ORANGE

GREEN

RED

ORANGE

RED

BLUE

ORANGE

GREEN

BLUE

GREEN

PURPLE

BLUE

PURPLE

RED

ORANGE

RED

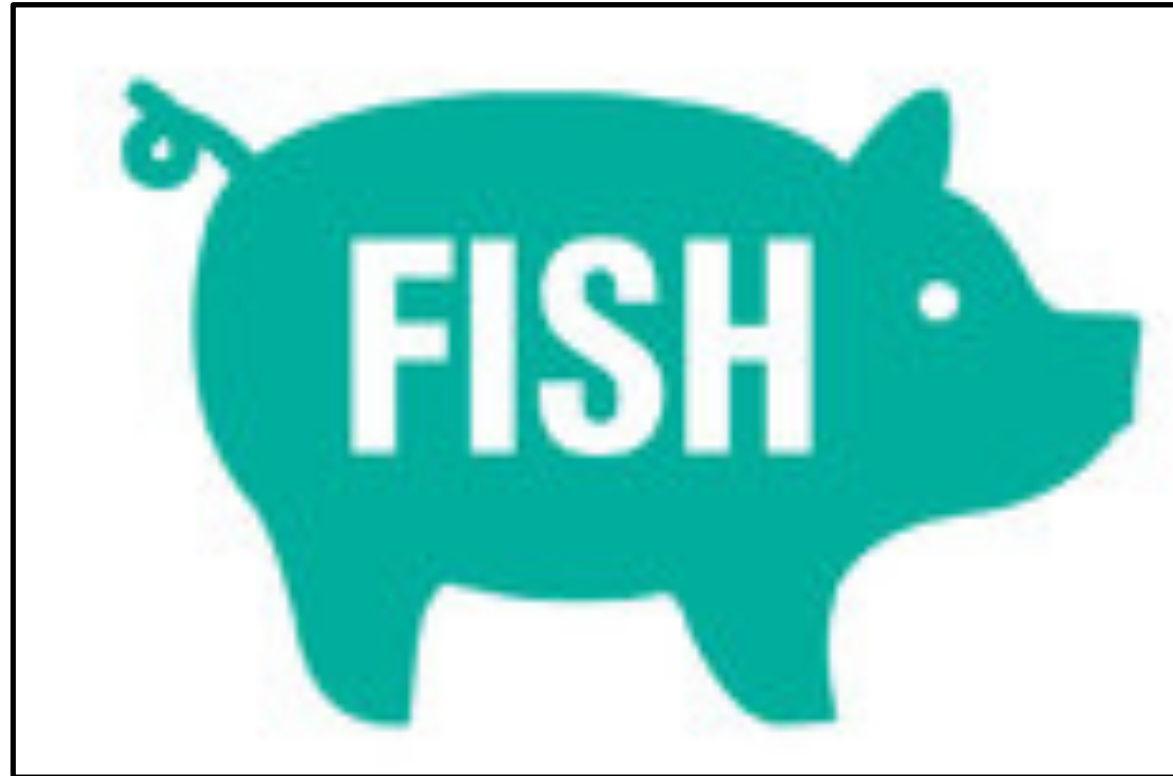
PURPLE

BLUE

GREEN

THE STROOP COLOR AND WORD TEST (SCWT)

- The Stroop Effect
 - “Interference” occurs no matter how hard you try
 - Uncontrollable with even the best conscious effort
- Related to **selective attention**: the ability to respond to certain environmental stimuli while ignoring others.
- Developed in the 1930s but still frequently used to measure how well people can do something that clashes with their typical response pattern.



CNA OYU
RAED TIHS?

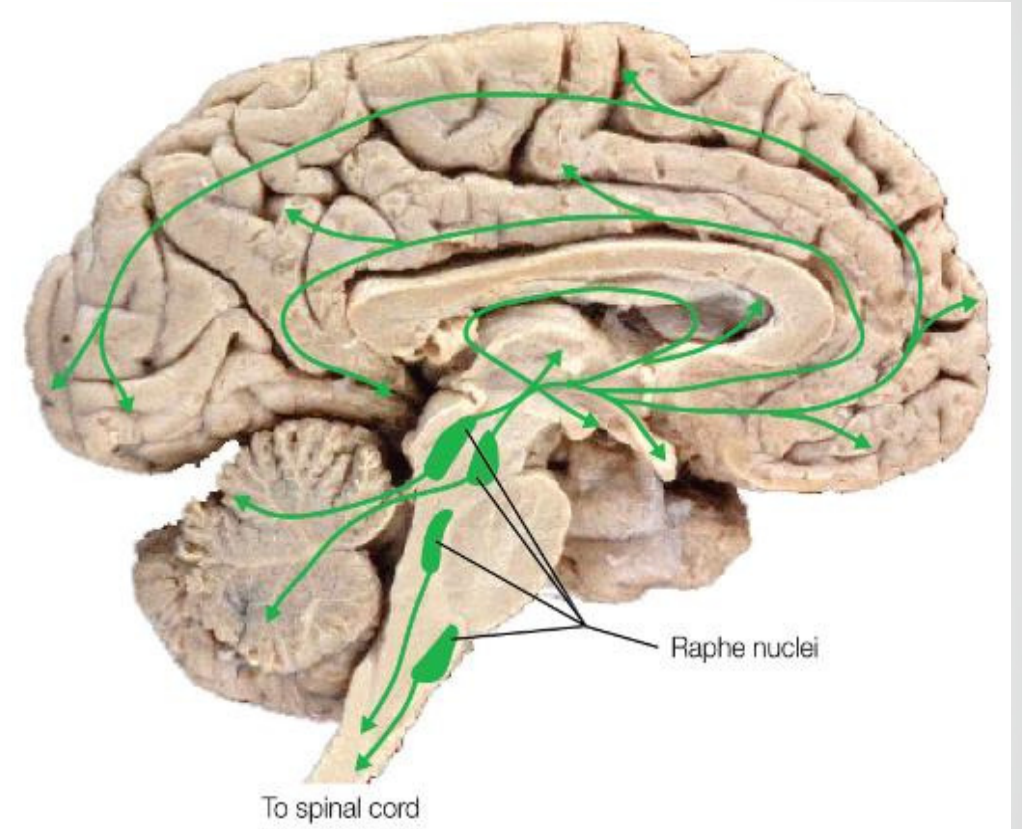


SCIENTIFIC BASIS OF IMPLICIT BIAS



HOW THE HUMAN BRAIN ADAPTS

- Decision-making, ambiguity, novelty and problem solving require significant cognitive load
- Priority is to conserve energy
- Priority is efficiency
- Human brain has evolved to have mental shortcuts that save time and yield reliable results (most of the time)



WHEN IMPLICIT BIAS SHOWS UP

- Stress
- Time Pressure
- Fatigue
- Multi-Tasking
- Need for closure or solution

WHEN IMPLICIT BIAS SHOWS UP

- Know that it's part of the human condition
- May not be aligned with our declared beliefs
- Stems from human tendency to gravitate towards, and show preference for things that are more like us, than different (or share similar characteristics)

“While we are physiologically hardwired for these biases and we must realize the world in which we live is a key contributor. Social cognition and mental models play a major role”

Canon™ Australia- “A photograph is shaped more by the person behind the camera than what is in front of it”

Alcoholic? Or Millionaire?

PSYCHIC



SELF-MADE MILLIONAIRE



EX-CONVICT



LIFE-SAVER



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ALCOHOLIC



FISHERMAN





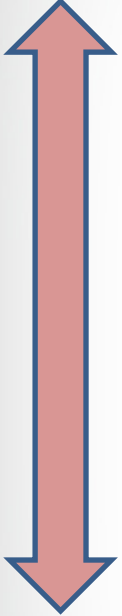
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“But you don’t look like a scientist!”

Banchefsky, S., Westfall, J., Park, B. *et al.* But You Don’t Look Like A Scientist!: Women Scientists with Feminine Appearance are Deemed Less Likely to be Scientists. *Sex Roles* **75**, 95–109 (2016).

“But you don’t look like a scientist!”

Masculine



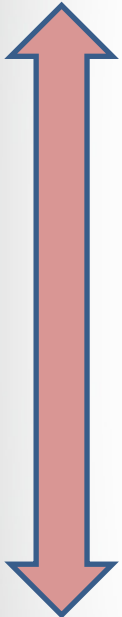
Feminine



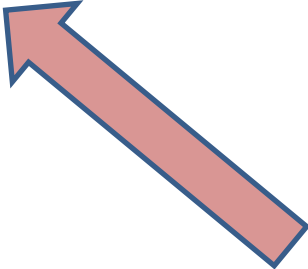
Banchefsky, S., Westfall, J., Park, B. *et al.* But You Don’t Look Like A Scientist!: Women Scientists with Feminine Appearance are Deemed Less Likely to be Scientists. *Sex Roles* **75**, 95–109 (2016).

FINDINGS

Masculine

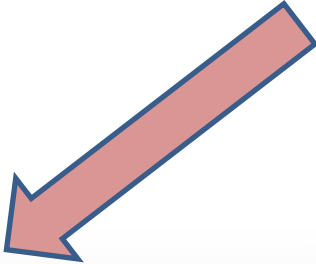


Feminine



NO difference in likelihood of being a Scientist or Being a Teacher

* Males = low likelihood of being a teacher



EMPATHY AND BIAS

Some findings might give us some clues on how to best teach empathy

Young women were more accurate in assessing the emotions seen in faces that they judged to be most similar to themselves.

Mitchell, Banaji and Macrae 2005 J of Cognitive Neuroscience
17:1306



EMPATHY AND RACE

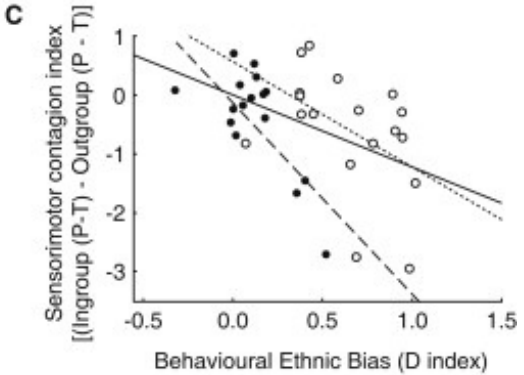
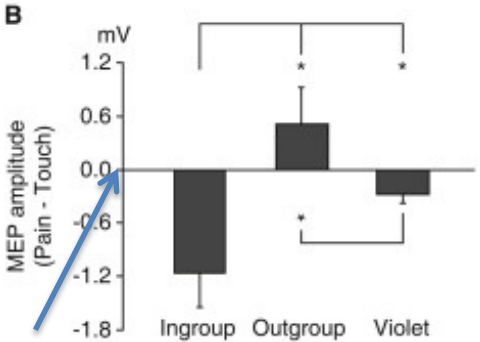
Some findings might give us some clues on how to best teach empathy

- Studies of sensorimotor contagion have shown that muscle specific motor-evoked potentials (MEPs) are inhibited when participants observe the physical suffering of another.
- However, this finding is not exhibited when the other is of a different race.
- Combined the use of fMRI with the IAT – Implicit Attitude Test



Intergroup Empathy: How Does Race Affect Empathic Neural Responses?

A Black and White participants observe a needle penetrating a black, white or purple hand.



(IAT)

Current Biology

B- MEPs inhibition is greater (more negative) for ingroup hands. Slightly inhibited for culturally unfamiliar hands.

C - Participants who had greater unconscious racial bias (IAT) showed more ingroup bias as measured by MEP.

MODULE III:

SELF-AWARENESS AND ASSESSMENT

UNDERSTANDING YOUR OWN BIASES

Take the IAT: Project Implicit <http://implicit.harvard.edu>

UNDERSTANDING YOUR OWN BIASES

The Implicit Association Test (IAT)


- Measures strength of associations between concepts
- Factors in time taken to make a selection
 - Measures the gap between the conscious and subconscious mind



HOW THE IAT WORKS

- Imperfect
- Indirect measure of implicit social cognition (unconscious attitudes)
- Sort and pair images and words as they flash on a computer screen
- Based on the assumption that response to images that are more easily associated will be faster than response to images that are less easily associated
- Resistant to social desirability

IAT OUTPUT

 **Project Implicit®** Featured Task

[Try a Study](#) [Take a Demo Test](#) [Background](#) [Tech Support](#) [The Scientists](#) [Project Implicit](#)

You have completed the African American - European American IAT.

Your Result
Your data suggest a strong automatic preference for European American compared to African American.

Thank you for your participation. Just below is a breakdown of the scores generated by others. Most respondents find it easier to associate *African American* with *Bad* and *European American* with *Good* compared to the reverse.

Many of the questions that you answered on the previous page have been addressed in research over the last 10 years. For example, the order that you performed the response pairing is influential, but procedural corrections largely eliminate that influence (see [FAQ #1](#)). Each visitor to the site completes the task in a randomized order. If you would like to learn more about the IAT, please visit the [FAQs and background information](#) section.

You are welcome to try [additional demonstration tasks](#), and we encourage you to register (easy) for the [research site](#) where you will gain access to studies about more than 100 topics about social groups, personality, pop culture, and more.

[FAQs](#) || [Research site](#) || [Demo site](#) || [Project Implicit Home](#)

Copyright © IAT Corp.

Percent of web respondents with each score

Strong automatic preference for White people compared to Black people	27%
Moderate automatic preference for White people compared to Black people	27%
Slight automatic preference for White people compared to Black people	16%
Little to no automatic preference between Black and White people	17%
Slight automatic preference for Black people compared to White people	6%
Moderate automatic preference for Black people compared to White people	4%
Strong automatic preference for Black people compared to White people	2%

[Click for detailed summary](#)

MODULE IV:

MITIGATING BIAS AND DEBIASING STRATEGIES

EMOTIONAL REGULATION

- “Thinking about thinking”
- The ability to deliberately detach oneself from the immediate context in which the decision is made (in order to reflect on the thinking process used)
- Be aware: recognize states of heightened emotions
- “Manage the meaning”
- Allows to check for conflicting evidence and consider alternatives to the decisions made *

*Cognitive debiasing 2: impediments to and strategies for change. Croskerry P, Singhal G, Mamede S

BMJ Qual Saf. 2013 Oct; 22 Suppl 2():ii65-ii72.



MANAGING THE UNCONSCIOUS

- Learn to correct our biases
- Use habit breaking routine
- Planned in advance when, where, and how to act
- Uses situational cues



STEREOTYPE REPLACEMENT



COUNTER-STEREOTYPING

- An imaging strategy to create an opposite image
 - Make a positive association with a counter-stereotypic image
- Makes positive exemplars salient when challenging the validity of a stereotype

INCREASED OPPORTUNITIES FOR CONTACT

- Find reasons to interact with individuals you would not typically come into contact with
 - Age
 - Race/ethnicity
 - Sexual orientation etc.



EXPOSURE AND INTER-GROUP INTERACTION



MINDFULNESS AND AWARENESS



INDIVIDUALISATION

- Requires a conscious effort to avoid making snap decisions
 - Get information about the individual
 - Avoid generalizing about group-based attributes



IDENTIFY HIGH-RISK SITUATIONS

- Proactively identify times when implicit bias is mostly likely to show up
 - Time pressure
 - Stress
 - Fatigue



INSTITUTIONAL- AND SYSTEM-LEVEL STRATEGIES

- Equity as a leader-driven priority
- Evaluate policies and procedures
- Hiring practices
 - Diversity and representativeness
 - Inclusive leadership
- Community partnership



MODULE V:

PROVIDER SCENARIOS AND REFLECTIONS

THANK YOU

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