STATE OF THE SCIENCE

Implicit Bias Review

Race and Ethnicity:
Views from Inside the Unconscious Mind

INCLUDING LINKS TO **ADDITIONAL BIAS-RELATED ARTICLES AND DOWNLOADABLE RESOURCES**

FEATURING:

01 **RESEARCH BEYOND THE BLACK/WHITE BINARY**

SCHOLARSHIP RELATED TO CHILDREN

IMPLICIT BIAS MITIGATION STRATEGIES

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

As a university-wide, interdisciplinary research institute, the **Kirwan Institute for the Study of Race and Ethnicity** works to deepen understanding of the causes of—and solutions to—racial and ethnic disparities worldwide, and to bring about a society that is fair and just for all people.

Our research is designed to be used to solve problems in society. Research and staff expertise are shared through an extensive network of colleagues and partners—ranging from other researchers, grassroots social justice advocates, policymakers, and community leaders—who can quickly put ideas into action.

STATE OF THE SCIENCE:

IMPLICIT BIAS REVIEW

2017 Edition

By Cheryl Staats,
Kelly Capatosto, Lena Tenney,
and Sarah Mamo

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Reader Guideposts

Given the size and scope of this publication, we recognize that readers with interests in particular subthemes may find the task of identifying their area(s) of interest a bit daunting. In response to this concern, we have identified a few notable subthemes and assigned them a visual marker for easier identification; these icons appear wherever each subtheme arises in this document, regardless of chapter.

Generally speaking, this year's academic literature continued to extend **beyond the Black/White binary** to be more inclusive of other racial and ethnic groups. This icon identifies these articles.

While certainly present in the education chapter, thematic **scholarship related to children** permeate other areas as well, as denoted by this icon.

One of the latter chapters of this document focuses on **general bias mitigation strategies**; however, some domain-specific interventions appear in other chapters. This icon will identify this literature wherever it appears.

Denotes a link to a **downloadable resource**

About this Review

With the release of this edition of the *State of the Science: Implicit Bias Review*, the Kirwan Institute celebrates the five-year anniversary of this signature annual publication. As part of our commitment to illuminating the multifaceted ways in which unconscious associations can create unintended outcomes, this publication highlights key selections from the academic literature published in 2016 as it pertains to the domains of criminal justice, health and health care, employment, education, and housing. In addition to these focus areas, this publication also uplifts implicit bias mitigation strategies and other major contributions to the field.

WHILE IMPLICIT BIAS HAS increasingly become a buzzword in both written and verbal discourse, our team established some parameters to reasonably limit the scope of this review. Notably, given the Kirwan Institute's focus on race and ethnicity, we continue to favor articles that directly focus on these topics as they intersect with other forms of identity. This narrows the scope of this publication but also allows us to provide a richer dialogue within this focus area. Moreover, in perhaps the most significant deviation from previous editions of the *State of the Science: Implicit Bias Review*, this year's publication does not attempt to be exhaustive. While in previous years our team had sought to include nearly all implicit bias articles and chapters that were published through formal channels (e.g., academic journals, but not theses or dissertations) during a given year, the substantial increase in implicit bias scholarship warranted a new approach. As such, this 2017 publication neither is nor attempts to be comprehensive.

Rather, in an attempt to maximize the impact of the content, we assessed each potential article for possible inclusion. This approach admittedly involved subjectivity; however, given our intensive engagement with the literature over the past five years, we have done our best to emphasize those that we believe reflected the greatest contributions to advancing the field.

The vast majority of this document reflects literature published in 2016; however, we acknowledge that some late 2015 articles and early 2017 publications are interspersed, particularly if the latter were available online before print.

Finally, a note about language: this document tends to use the term "implicit bias" over "unconscious bias," though the two terms are often used interchangeably in the literature.

About the Authors

KELLY CAPATOSTO is a Senior Research Associate working to expand the Kirwan Institute's race and cognition work. Kelly focuses on applying research on implicit racial bias to inform education policy and practice. Much of her work addresses issues of school discipline, disability, and racialized trauma. Beyond education, Kelly has written several interdisciplinary reports linking implicit bias insights to other domains, including housing and criminal justice. Her research interests include exploring how humans' conceptualization of race influences outcomes in the following areas: social and emotional cognition, education, housing and lending, and predictive analytics and other Big Data applications.

SARAH MAMO is a Student Research Assistant and graduate of The Ohio State University with B.A.s in African-American & African Studies and Women's, Gender, and Sexuality Studies. Her interests are in the histories and current manifestations of oppression, of which implicit bias is an iteration.

CHERYL STAATS is a Senior Researcher at the Kirwan Institute who leads a robust portfolio of race and cognition research. Broadly speaking, these projects consider how cognitive forces that shape individual behavior outside of conscious awareness can contribute to societal inequities. Cheryl received her Bachelor's degree from the University of Dayton and earned a Master's degree from The Ohio State University.

LENA TENNEY is a Coordinator of Public Engagement at the Kirwan Institute. They direct the engagement portfolio of the Race & Cognition Program, which includes facilitating presentations, workshops, and webinars about implicit bias and structural racism for audiences across the country. A trained intergroup dialogue facilitator, Lena has a background in inclusive education and coalitional activism work. Their research interests include Whiteness, LGBTQ identities, inclusive language, higher education, and public policy. Lena earned a Master's of Education and a Masters of Public Administration from the University of Oklahoma.

Previous Editions

Given that this is the fifth edition of the *State of the Science*, this document assumes that readers have a general understanding of implicit bias and its operation. For those who would like greater detail on the foundational ideas of this concept, please see our previous publications.

2013 Edition
The first several chapters of this edition provide an extensive overview of the concept, its operation, and its measurement.

2014 Edition
For a primer on implicit bias, see Chapter One of the 2014 edition. This edition also has a quick facts sheet in Appendix B.

2015 Edition
A small "Mythbusters" feature in the first chapter of this edition exposes the myths associated with implicit bias.

2016 Edition
An early chapter of the 2016 edition has a brief infographic that helps readers visualize some key concepts of implicit bias.

Download previous editions at: **kirwaninstitute.osu.edu/implicit-bias-review**

im•plic•it bi•as /im ˋplisit ˋbīas/ : The attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner. Activated involuntarily, without awareness or intentional control. Can be either positive or negative. Everyone is susceptible.

Key Characteristics

1. **Unconscious and automatic:** They are activated without an individuals' intention or control. [1, 2]

2. **Pervasive:** Everyone possesses them, even those avowing commitments to impartiality. [3–7]

3. **Do not always align with explicit beliefs:** Implicit and explicit biases are generally regarded as related but distinct mental constructs. [8–11]

4. **Have real-world effects on behavior:** As discussed in this publication and other editions of the State of the Science: Implicit Bias Review, significant research has documented real-world effects of implicit bias across domains such as employment, education, and criminal justice, among others.

5. **Are malleable:** The biases and associations we have formed can be "unlearned" and replaced with new mental associations. [1, 5, 12–16]

Dear Reader,

As the interim Executive Director for the Kirwan Institute for the Study of Race and Ethnicity, it is my great pleasure to announce the release our 2017 issue of the *State of the Science: Implicit Bias Review*—marking the fifth-year anniversary of our flagship publication.

If you have used this resource and have feedback, or just want to learn more about the Kirwan Institute, please do not hesitate to reach out. We look forward to hearing from you.

This release comes at a very important time. More than ever, Kirwan and our partners in equity work can see the importance of how we shape the narrative of race and equity in this country. For the last five years, the *State of the Science* has been one of the ways that we have been able to add depth to this often one-sided narrative, by pointing to the complex underpinnings of how peoples' conception of race influences our perceptions, thoughts, and relationships.

This edition of the *State of the Science: Implicit Bias Review* was originally conceived as a way for Kirwan to get a better understanding on what was still an emerging topic. Five years ago, we could not have imagined how many of our partners would also be interested in this resource as a way to help broaden the national discussion on racial equity. Kirwan is delighted to be able to share this work with legal professionals, non-profit leaders, civil rights activists, doctors, teachers, and everyone in between.

This release is a shining example of the tremendous effort and dedication of our Race and Cognition Program to living out Kirwan's mission. The positive acclaim for this publication and its impact on addressing real world inequities continues to make the Kirwan Institute proud.

At such an important milestone, it is not only important to celebrate the impact of our work, but we must also look to the future to ensure that the implicit bias research will continue to help us all build a more equitable and inclusive world. For example, we have some exciting plans to make our research even more accessible and responsive to the needs of our communities and partners. We look forward to sharing our vision for the future of the *State of the Science* with you in 2018—stay tuned!

Sincerely,

ARTHUR R. JAMES, M.D.

"In addition to urgent conversations about race and criminal justice, and employment and gender, discussions about implicit bias have spread to Hollywood, the sciences, and the presidential election."

JESSICA NORDELL, 2017 [17]

1 Introduction

As in prior years, the sense that the concept of implicit bias continually gained momentum in both public discourse and academic communities was hard to deny. Even individuals who maybe had never previously heard the term likely were exposed to it at some point in 2016. As discussed in this chapter, the venues facilitating this exposure perhaps may have been unexpected or unlikely.

Public Discourse

In terms of the general public's exposure to and efforts to grapple with the concept, one of the memorable moments that shaped early 2016 was the controversy that emerged surrounding the Academy Awards. Indeed, long before the iconic gold Oscar statuettes were distributed on February 29th, the 2016 Academy of Motion Picture Arts and Sciences' 88th annual ceremony celebrating the year's achievements in film had generated tremendous attention and "buzz." Under different circumstances, this likely would have been a boon to the Academy, holding the promise of high television viewer ratings and publicity. The 2016 hype and attention, however, took a decidedly different tone when the announcement of the 20 contenders for Best Actor and Actress (for both leading and support-

ing roles) generated a racially monolithic pool of exclusively White nominees for the second year in a row. Even those who do not follow the Oscars at all inevitably heard of the controversy, as it garnered news attention and quickly spread through various social media platforms, ultimately yielding the popular Twitter hashtag #OscarsSoWhite.

Among several explanations that surfaced in this dialogue, one that gained particular attention was implicit bias. Scholars, commentators, and even the actors themselves called attention to this unconscious phenomenon as a way of understanding how the uniformly White nomination pool for Best Actor/Actress could persist yet another year. For example, 2014 Best Supporting Actress winner, Lupita Nyong'o, shared her sentiments on the lack of diversity and possible influence of implicit bias when she wrote,

> I am disappointed by the lack of inclusion in this year's Academy Awards nominations. It has me thinking about unconscious prejudice and what merits prestige in our culture. The Awards should not dictate the terms of art in our modern society, but rather be a diverse reflection of the best of what our art has to offer today. I stand with my peers

who are calling for change in expanding the stories that are told and recognition of the people who tell them. [18]

....

BOOKENDING THIS DIALOGUE in the latter months of 2016 was perhaps an even more visible platform on which implicit bias emerged as a conversation topic: the 2016 Presidential and Vice-Presidential debates. First, during the September 26th Presidential debate between Democratic nominee Hillary Clinton and her Republican counterpart Donald Trump, NBC news moderator Lester Holt addressed Clinton with an inquiry regarding whether she believed police are implicitly biased against Black people. Her response articulated the idea that implicit bias is not just a challenge for individuals in that specific occupation; everyone is susceptible to these unconscious cognitive dynamics. [For more on the pervasiveness of implicit attitudes and stereotypes, see 21.] Moreover, in her response, Secretary Clinton also acknowledged the often weighty implications of implicit bias by asserting, "it can have literally fatal consequences." [22] Supporting this latter statement is a considerable body of research (appropriately dubbed "shooter bias" research) that examines how law enforcement officers' implicit biases can influence decisions regarding how quickly weapons are discharged, and, quite significantly, at whom. [see, e.g., 23, 24, 25]

Similarly, the term resurfaced in the October 4th Vice-Presidential debate featuring Democratic nominee, Senator Tim Kaine, and the Republican contender, Governor Mike Pence. Pence's handling of the concept, however, garnered some criticism, as portions of response failed to align with research-based understandings. [26, 27] Notably, Governor Pence's quote implying that an individual could not have an implicit bias against his or her own ingroup: "Senator, when African American police officers involved in a police action shooting involving an African American, why would Hillary Clinton accuse that African American police officer of implicit bias?" [28] does not reflect the reality that implicit anti-ingroup bias has been documented in the scholarly literature. [29–33]

Finally, another notable moment from 2016 that provoked implicit bias conversations in the public sphere included an October incident on Delta airlines in which Dr. Tamika Cross, a Black OB/GYN doctor from Houston, was hindered from assisting a fellow passenger who was suffering a medical emergency because the flight attendants questioned whether she was actually a medical professional. This situation led to commentaries surrounding how implicit

#OscarsSoWhite: The 2016 Academy Awards created controversy when the 20 nominees for Best Actor and Actress were announced and, for the second year in a row, all were White.

biases, notably those involving race, can shape who is (or, in this case, who is not) perceived to be a doctor. [34]

Trends in the Field
Looking at the academic literature from 2016, several trends emerged. First, while children have long been an aspect of this field of research [see, e.g., 35, 36–41], several studies this year sought to examine not just the presence of implicit bias in children, but more specifically how implicit biases may operate differently for this population compared to adults. [42–45]

Also notable this year was substantial discourse surrounding the notion of the "Obama effect"—that is, the effect that former President Barack Obama may have had on implicit racial attitudes, such as from being a highly-visible counter-stereotypical exemplar. As discussed in a later chapter and highlighted in a special issue of *Social Cognition*, the research findings on this subject remain mixed.

Finally, while police-related literature on implicit bias has traditionally been common, this year's work in that realm trended specifically toward discussions regarding use of force. [46–49] ■

During the 2016 Presidential debate, Hillary Clinton articulated the idea that implicit bias is not just a challenge for individuals, but that everyone is susceptible to these unconscious cognitive dynamics. She also acknowledged the weighty implications of implicit bias by asserting, "it can have literally fatal consequences."

Deepinder Singh Mayell

Applying Implicit Bias Scholarship to Real-World Issues: An Immigration Toolkit

Sarah Mamo, a student research assistant at the Kirwan Institute, interviewed **Deepinder Singh Mayell**, the Director of Education and Outreach at the James H. Binger Center for New Americans on the Center's recent work on an immigration toolkit specifically geared toward Somali immigrants.

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SARAH MAMO: TELL ME A LITTLE ABOUT YOURSELF AND YOUR RESEARCH.

Deepinder Singh Mayell: I am the Director of Education and Outreach at the James H. Binger Center for New Americans, which is a relatively new clinical education program that was recently endowed with a gift from the Robina Foundation. The Center hosts one of the most robust immigration clinical programs in the country; it's a unique and powerful kind of place.

One project we're currently working on is a collaboration between the Binger Center for New Americans, The Advocates for Human Rights, and Robins Kaplan, LLP, a law firm. The impetus for this project came to us in 2013, when deportations of Somali immigrants in the U.S. started to pick up. For years, individuals weren't being deported to Somalia because the country was suffering from years of warfare and lacked infrastructure as well as proper diplomatic relations with the U.S. Only recently have these individuals been deported to Somalia.

We started by exploring the barriers a Somali client faces as they go through the system. We conducted interviews with immigration attorneys and local advocates and held a community roundtable. During the process, it became clear that, in addition to the formal legal complexities of immigration cases, there were potential significant issues with implicit bias throughout the process that operated as a barrier to potential favorable outcomes for Somali immigrants in proceedings.

The toolkit looks mostly at Somali immigrant populations in the U.S. We take a closer look at the failure of refugee integration and the layers of obstacles that face Somali

> "Many refugees are fleeing terrible conditions, then go through a harrowing journey to get here and a long court process, then are introduced to American poverty and racism, which is incredibly difficult to overcome, due in part to implicit bias"

immigrants living in low-opportunity neighborhoods, including lack of employment opportunities, disparate educational outcomes, Islamophobia, and anti-immigrant sentiment. Thanks to the Kirwan Institute, our team was able to utilize opportunity mapping to better illustrate the multitude of challenges that face Somali immigrants. People that reside in these communities are also subjected to racial profiling and over-policing by local law enforcement. Somalis are subjected to an additional layer of federal profiling as a Muslim community. Criminal charges or minor infractions can easily lead to deportation proceedings where a Somali immigrant will face legal obstacles to maintain refugee or resident status, including substantial credibility and corroboration standards. Somali immigrants may also be subjected to added screenings, prolonged detention, and aggressive questioning during proceedings as potentially having links to terrorism.

SM: WHAT IS THE PURPOSE AND FUNCTION OF THE TOOLKIT?

DSM: This Toolkit applies findings from a growing body of cognitive research on implicit bias to immigration law practice specifically for lawyers who represent Somali immigrants in immigration proceedings. To be successful, immigrants must overcome the implicit biases that players within the system harbor, including judges, police officers, prosecutors, and federal officials, as well as criminal defense and immigration attorneys. Biases held by these actors may impact the effectiveness and fairness of the immigration system, and understanding the power and scope of bias is integral to successful legal representation.

First, we came up with list of established techniques to counter implicit bias: intergroup contact, perspective-taking, cultural competence-building, counter-stereotypical exemplars, self-analysis, and framing.

The first part of the toolkit is unpacking attorney-client relationship, getting them to consider things they wouldn't normally consider: trauma, gender roles, language styles, racial anxiety, lack of their client's familiarity with U.S. legal system, and misinformation in the community, all of which need to be worked on by an attorney. The second part of the toolkit is designed to build cultural competency and provides a digest of Somali cultural information, including a Somali clan chart and descriptions about communication styles, gender-based issues, and complications in names.

Next, the toolkit examines conditions in immigration court and in immigration law, such as discretionary standards, that may contribute to an environment where implicit bias can affect fair outcomes. The toolkit offers guidance based on recognized methods to combat and mitigate the negative effects of implicit bias and provides examples of how to frame cases to avoid common pitfalls. This includes an exploration of the expanding definition of "terrorism" over the last few decades and how its application can cause significant issues for clients.

SM: WHO DO YOU THINK MOST BENEFITS FROM THE TOOLKIT?

DSM: Anyone representing Somalis or other refugee groups in the immigration system: immigrants, refugees, and those studying and practicing immigration law. It's a helpful tool to have on lawyers' desks when they encounter these issues.

SM: WHAT LED TO THE FORMATION OF THE TOOLKIT? DID ANY EVENTS IN PARTICULAR SPUR MOVEMENTS TO ESTABLISH THE TOOLKIT?

DSM: The resumption of the deportations led to its formation. In 2012, there were 157 deportations of Somali immigrants, in 2013 there were 166, then 243, 326, and last year, there were 438. The numbers are picking up and will likely continue to do so. Between 2012-2013, the deportations were initially occurring, and community members were looking for something to help navigate the process. Once they started looking into the process, they realized it was a deep issue, but they were nevertheless committed to doing something which had the most impact.

SM: HOW DO YOU FORESEE THE TOOLKIT BEING USED ON A GEOGRAPHICAL LEVEL? IF THE TOOLKIT IS U.S.-SPECIFIC, DO YOU THINK IT HOLDS ANY INTERNATIONAL RELEVANCE?

DSM: Regionally, it relates to individuals representing Somalis and populations who have been in the U.S. for a number of years across the country.

The global implications of the toolkit are more broad. Internationally, all countries are bound by international law that protects refugees. The toolkit shines a light on the process of integration and the obstacles that refugee populations have to securing a stable life. Many refugees are fleeing terrible conditions, then go through a harrowing journey to get here and a long court process, then are introduced to American poverty and racism, which is incredibly difficult to overcome, due in part to implicit bias.

The question of integrating populations fairly, with dignity, and consideration of human rights is one of the tantamount challenges that the planet is facing, unless you want a world of walls that are militarized.

SM: DOES THE TOOLKIT DRAW FROM ANY EXISTING LITERATURE ON IMPLICIT BIAS?

DSM: It draws from Fatma Marouf's "Implicit Bias and Immigration Courts," Jerry Kang et al.'s "Implicit Bias in the Courtroom," Nicole E. Negowetti's "Navigating the Pitfalls of Implicit Bias: A Cognitive Science Primer for Civil Litigators," the Kirwan Institute's work, especially that of opportunity mapping, and Susan Bryant's "The Five Habits: Building Cross-Cultural Competence in Lawyers."

SM: DOES THE TOOLKIT MAKE ANY NEW CONTRIBUTIONS TO IMPLICIT BIAS?

DSM: The toolkit takes implicit bias and cognitive research and applies it more deeply to immigration courts, looking at the actual practice of attorneys as they work with immigrants.

SM: IF YOU HAD TO DESCRIBE THE TOOLKIT AND IMPLICIT BIAS TO SOMEONE AND ITS SIGNIFICANCE IN A FEW SENTENCES, WHAT WOULD YOU SAY IF THEY KNEW NOTHING ABOUT IMMIGRATION LAW OR IMPLICIT BIAS?

DM: The toolkit is trying to help protect people who have valid right to stay in the U.S. overcome a myriad of challenges that may prevent them from being successful.

For more on the James H. Binger Center for New Americans, please visit: **https://www.law.umn.edu/ james-h-binger-center-new-americans**

"But implicit bias also presents unique challenges to effective law enforcement, because it can alter where investigators and prosecutors look for evidence and how they analyze it without their awareness or ability to compensate."

SALLY Q. YATES, FORMER UNITED STATES DEPUTY ATTORNEY GENERAL, 2016 [20]

2 Criminal Justice

As a typically robust area of implicit bias scholarship, given its range of potentially life-altering consequences, the criminal justice domain remains an area of rich dialogue, ranging from policing to assorted courtroom dynamics.

Police: Use of Force

Influenced by recent events, researchers Lorie Fridell and Hyeyoung Lim studied the connection between laboratory research developments and actual field data on police use of force on Black subjects. [46] Using police reports, Fridell and Lim examined two competing empirical perspectives related to use of force with Black subjects: 1) the implicit bias perspective, and 2) the counter-bias perspective. The implicit bias perspective asserts that police exhibit implicit associations between Blackness and crime, which would result in more use of force with Black subjects than White subjects. In contrast, the counter-bias perspective posits that external consequences for use of force with Black subjects (e.g., prosecution or negative media attention) would result in police officers overcoming racial biases and using less force with Blacks compared to Whites. The data from a police station in a large Texas city encompassed 1,846 incident reports over three years involving Black and White males. The analysis studied instances where police used intermediate uses of force (e.g., hard empty hand control, pepper spray, and electronic control devices) versus lower-level uses of force (e.g., soft empty hand control). Moreover, the study included a measure of neighborhood crime rate as a second independent variable influencing the use of force. Situational and demographic variables controlled for included, but were not limited to, level of subjects' resistance, officers' race, officers' education level, and the precipitating incident type.

Consistent with the implicit bias perspective, the results indicated that police were more likely to use one form of intermediate force—electronic control devices—compared to a lower-level use of force on Black subjects compared to White subjects. [46] No racial differences were found where officers used other types of intermediate force. Moreover, racial differences in use of force were only present in neighborhoods with moderate or low crime rates. Affirming other research on the topic, Fridell and Lim posited the disappearing presence of racial differences in areas of high crime was consistent with the

implicit bias perspective demonstrated by the notion that a negative bias toward a neighborhood can supersede a racial bias. [46]

Moving beyond a purely intergroup bias (e.g., Black versus White) perspective, Kahn and colleagues conducted a regression analysis to examine whether intragroup (within race) biases shared a relationship with use of force data at a large, urban police department. [48] As a measure of intragroup differences, sample raters coded the phenotypic stereotypicality (i.e., how representative one's physical appearance is of their racial category) of subjects' faces from 177 police case files, which were randomly selected from one year of service records. [For a review of this scale, see 50.] Use of force was measured on a 1–8 scale according to severity, where 1 included control holds and 8 included deadly force. The researchers controlled for factors such as gender, signs of a chemical influence, mental health, and the type of crime. Results revealed that the more stereotypically White the suspect was, the less likely police were to use force in general or use severe force; however, possessing more White phenotypic traits did not indicate less use of force for non-Whites. [48] This finding indicated that intragroup bias can serve as a protective factor for Whites, but not non-Whites who possess phenotypically-White traits. This work is reminiscent of prior scholarship on the influence of Afrocentric features in criminal justice proceedings. [51, 52]

"many individuals implicitly associate Black males with characteristics such as criminality, sub-humanness, or being capable of superhuman behavior."

Continuing the inquiry into police use of force, a 2016 article by Hall, Hall, and Perry provided a review of both implicit racial biases and the unique characteristics of police work as a framework for understanding excessive use of force during police encounters with Black male civilians. [49] As the basis of the review, the researchers uplifted studies that showed police officers are more likely to hold implicitly

positive attitudes toward Whites and negative attitudes toward Blacks. [23, 50, 53] In addition to this general implicit bias, many individuals implicitly associate Black males with characteristics such as criminality, sub-humanness, or being capable of superhuman behavior. [50, 54–56] In conjunction with these implicit processes, officers may possess unique characteristics compared to those in other professions, such as need for high intergroup connectivity, valuing order, and appreciating hierarchy. Thus, the researchers suggested that the interaction between these psychological factors and the nature of police work may elicit intergroup threat and suspicion in both parties, thereby making these encounters especially risky for excessive force. Based on this framework, the researchers offered a list of solutions for reducing excessive force during encounters with police and Black males, many of which are based on the research related to implicit bias: 1) addressing prejudice at a young age, 2) promoting intergroup contact, 3) supporting community police efforts, 4) diversifying the police force, 5) rotating police assignments, 6) making diversity training mandatory, 7) requiring buy-in from police leadership, and 8) increasing accountability within the force. [49]

Judges

Clair and Winter conducted interviews to examine judges' perceptions of racial disparities in the courts and what they determined was the best way to address them. [57] Focusing on the processes of arraignment, plea hearings, jury selection, and sentencing, the researchers interviewed 59 judges in the upper and lower courts in a northeast state where Black and Latinos were disproportionately incarcerated to examine the situational factors where disparities may be more likely occur. When discussing racial disparities, judges pointed to the presence of disparate treatment (e.g., a court official's implicit and explicit biases) or disparate impact (e.g., the differential impact of seemingly neutral laws, or how poverty affects offense rates). Most judges believed that a combination of these two sources explained racial disparities, while some judges (24%) believed the latter alone was the source of disparities. [57] As part of the discussions on disparate impact, many judges report-

AUTHOR REFLECTION

Cheryl Staats

AS SOMEONE WHO NATURALLY prefers practicality, it is unsurprising that I favor applied research over traditional academic scholarship. I appreciate taking scholarly ideas and seeing them yield positive impacts in "real life" situations. As such, I also enjoy seeing others bridge this divide to bring esoteric academic concepts to bear in fields that can meaningfully learn and benefit from that knowledge.

A great example of applying implicit bias scholarship to "real world" circumstances is Dr. Lorie A. Fridell's 2017 book, *Producing Bias-Free Policing: A Science-Based Approach*. Beyond summarizing the implicit bias literature as it pertains to police, Fridell offers clear strategies and tools that agencies may use in their pursuit of fair and impartial policing. This approach recognizes that past interventions to address bias have not always yielded success; by illuminating the latest social psychological research on implicit bias, readers are able to understand the merits of taking a bias-informed approach to police work.

With an eye toward providing concrete and useful guidance, this text broadly focuses on how police professionals can apply the science of implicit bias to numerous aspects of their operations, ranging from decision-making in the field to messaging, policies, hiring practices, and other agency dynamics. Fridell equips readers with specific next steps for implementing what she refers to as a "new paradigm" of policing (i.e., one that recognizes implicit biases rather than solely explicit) throughout the entirety of an agency.

While the intended audience for this book is police professionals, Fridell acknowledges that bias is in no way a problem specific to that occupation. Rather, she articulates that it is our unconscious cognition—regardless of one's profession—that provokes the need to be bias-aware. Emphasizing this cognitive dynamic as shared across humanity, she writes, "Because police are human, they have biases; because they have biases, every agency needs to be proactive in producing bias-free policing." (p. 5)

SCHOLARSHIP MENTIONED: Fridell, L.A., *Producing Bias-Free Policing: A Science-Based Approach*. Springer Briefs in Criminology: Translational Criminology. 2017: Springer.

ed the contribution of their own implicit biases. Several noted their familiarity with research on implicit bias in sentencing either through the media or conferences; this knowledge led many to reflect on their biases and consider how these biases influenced their decision-making.

The researchers grouped the strategies the judges supported to address disparities into two categories: non-interventionist and interventionist. The non-interventionist approach defers to the prosecutors' and defenders' judgments during arraignment, plea hearing, and jury selection. In contrast, the interventionist approach includes proactive strategies to address disparities such as rejecting plea deals that seem racially motivated or striving to have a diverse jury. The majority of judges held non-interventionist values. [57] Thus, this study demonstrated that even if judges acknowledged the impact of implicit biases from court actors, they may still allow disparities to occur by not engaging in interventions to address them.

Juries
Previous research on court proceedings has indicated that implicit biases can impact juror decisions. [58-63] Morrison et al. add to this body of knowledge by exploring whether legal professionals are capable of identifying jurors' implicit biases through the *voir dire* process and if it is possible to use this information to exclude potential jury members in a way that is favorable to their case. [64]

TWO LENSES...
ONE GOAL

Understanding the **Psychological** and **Structural Barriers** People of Color Face in the Criminal Justice System

BY KELLY CAPATOSTO

An immense body of research has demonstrated the adverse experiences and outcomes related to criminal justice system involvement for marginalized groups. Expanding this conversation, we highlight how these adverse experiences can be the result of (1) unconscious discrimination; and/or (2) historic policies and related structural dynamics.

As a first step to understanding how the criminal justice system perpetuates racial inequities in incarceration, we must consider both the psychological and structural barriers along this pathway. These barriers to justice for communities of color can manifest both preceding contact and during interactions within the criminal justice system, thereby influencing the likelihood of conviction, incarceration, and sentencing.

The following examples highlight key points of contact between people of color and the criminal justice system where racialized barriers are likely to be present.

Internal Factors

Research affirms that the experience of a person of color while in the custody of the criminal justice system is often distinct from the experience of a similarly situated White individual.

PLEA BARGAINING
During the plea bargaining process the defendant has the opportunity to plead guilty to a charge, often in exchange for a reduced sentence. Although not much research has been conducted on this topic, some evidence suggests Black and Hispanic defendants are more adversely impacted by this process than Whites. [17]

JUDGE AND JURY VERDICTS AND SENTENCING
Whether the ruling is determined by a judge or a jury, there are implicit and historical racial biases that can influence the decision-making process.

External Factors

Our understanding of how communities of color experience the criminal justice system does not begin in a police station or a courthouse. Rather, the external or contextual factors leading up to the initial contact with the criminal justice system must be considered.

CRIMINALIZATION OF RACIAL MINORITIES
The criminalization of individuals based on their racial identity has a long and sordid history in the United States. This trend is fueled by individuals' implicit and explicit attitudes, as well as laws, policies and major events; for example, there was a major shift in negative stereotypes and attitudes toward Arabs following 9/11. [4]

TRAFFIC STOPS
Traffic stops and searches are stressful experiences, which can also be accompanied by racial animus or anxiety. This is particularly true for Blacks who experience a disproportionate likelihood of being stopped and searched, leading to the creation of phrases such as "driving while Black" used to convey the perceived additional risk. [12]

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The study took place in three stages. During the first stage, a group of legal professionals responded to an online quiz by indicating what questions they would typically ask during a preemptory challenge (i.e., the process for removing a proposed juror). During the second stage, 285 participants responded to an online form that included the most popular questions from stage one. In addition to answering the questions, participants responded to an Implicit Association Test (IAT) and an explicit bias questionnaire, and they provided their racial demographic. In the final stage, 143 legal professionals were randomly assigned to act as a prosecutor or defender role in an online simulation of the *voir dire* process. The simulated trial either depicted a White defendant and a Black victim or Black defendant and a White victim. Participants were matched with a random pool of the respondents from stage two as the simulated jury. They could ask any of the questions gathered from stage one and could choose to exclude potential jurors based on their response. Results indicated that when the defendant was

"many individuals implicitly associate Black males with characteristics such as criminality, sub-humanness, or being capable of superhuman behavior."

Black and the victim was White, the prosecutors' juror selection included individuals with higher implicit pro-White biases compared to the jurors selected by the defense lawyer. [64] This result indicated that when a Black defendant is on trial, both prosecutors and defenders were able to select jurors whose biases aligned more with their proposed goal; however, this effect was not significant if the defendant was White and the victim was Black. Additionally, the race of the juror accounted for some of this relationship between jurors' implicit biases and the role of the lawyer making the selection.

Other Courtroom Dynamics

Applying implicit bias insights to court proceedings, Roberts argued against the practice of impeaching (i.e., discrediting) a defendant's testimony due to a prior arrest. [65] Roberts noted that by silencing the defendant's testimony, court actors are more likely to rely on implicit biases associated with the defendant's identity during the fact-finding process. Moreover, Roberts highlighted how the implicit association between African Americans and criminality is especially detrimental to the presumption of innocence. To counter these negative effects, she made the case that this testimony can help to individuate a defendant—meaning the judge and jury are more likely to see him/her, and the circumstances of his/her case, as unique. As such, a testimony has the potential to counter court actors' implicit biases associated with a defendant's identity, particularly if the defendant is African American or of another racial minority group. Roberts' suggestion broadly connects to other scholarship that encourages individuation as a way of addressing implicit biases. [see, e.g., 66, 67]

In a theoretical piece, Lacey argued that knowledge of implicit bias and other cognitive forces should fundamentally alter how the legal system conceptualizes criminal responsibility. [68] This perspective is juxtaposed against the current understanding of criminality, which relies on both cognitive and contextual factors to jointly determine an individual's responsibility for their criminal conduct. In contrast, Lacey asserted that an understanding of implicit biases raises questions regarding justice actors' perceptions of a subject's level of responsibility. Moreover, there may be implications related to the individual's actual level of culpability (i.e., to what extent can individuals be responsible for the impact of their implicit biases?). [For other research on implicit bias and perceptions of culpability, see 56.] As such, Lacey recommended an expanded theory of criminalization that accounts for the effects of socialization, rather than viewing the typical subject of law as a rational agent.

Legal Education

Intersecting other social science work, Russell A. McClain analyzed the relationship between implicit bias and stereotype threat on the law school experience. [69] Stereotype threat occurs when "members of a group perform at levels

lower than that at which they are capable" as a result of awareness of existing stereotypes against a group identity or through feeling they do not belong in a given setting [69]. The authors noted the compounding effects that implicit bias and stereotype threat can have on students' academic achievement and relationship building. For example, if professors or other members of the law school hold negative implicit biases toward minority students, their actions may limit opportunities for students to engage, which in turn can exacerbate the likelihood of stereotype threat. Moreover, the underrepresentation of minorities in faculty positions due to implicit biases can also activate students' stereotype threat. The authors noted the implicit biases of White students in law school can have a similar impact. For example, if White students are less likely to engage with minority students when forming study groups, this could make minority students feel isolated and disconnected. These examples illustrate what the authors describe as a feedback loop between stereotype threat and performance, which ultimately has the potential to affirm the implicit biases held by others in the law school setting.

GENERAL MITIGATION STRATEGIES

Interventions and Recommendations

As part of a comprehensive guidance document for reducing community gun violence, the Urban Institute—in collaboration with the Joint Center for Political and Economic Studies and the Joyce Foundation—provided recommendations related to implicit bias mitigation as a means to improve relationships between police and communities of color. [70] First, enforcement agencies should require institutional adoption of practices that are informed by implicit bias. This could entail applying implicit bias knowledge to hiring and enforcement decisions or offering trainings designed to mitigate the impact of implicit bias. Second, officer training should focus on practices that are "procedurally just." [70] By directing officers back to processes that underlie just policing, officers may be less likely to rely on biases related to individuals' identity during enforcement interactions. Finally, enforcement agencies should ensure

that officers reflect the diversity of the neighborhoods they patrol. By doing so, officers will have the opportunity to work in a variety of neighborhoods and contexts, thereby broadening their perceptions of community interactions. [70]

Building on prior research demonstrating the effect of implicit racial bias on policing and decisions to shoot [see, for example, 23, 24, 25, 71], Lee proposed two interventions that police departments can implement to reduce shooting fatalities. [72] The first intervention—increased training on shooting exercises—stems from implicit bias research that suggests officers are less biased and more accurate in their decisions to shoot than are civilians. [23, 24] This line of research suggests that the use of training scenarios, where race is not related to the possession of a weapon, may mitigate bias and improve accuracy in decisions to shoot. [For related research, see 71, 73.] Lee's second suggested intervention involves a paradigm shift, which decreases officers' reliance on weapons to successfully perform their job. As such, Lee proposed martial arts training as a way to prepare officers to address confrontational situations in the field without having to use deadly force. Moreover, the research suggested that the benefits of martial arts training cascades into other dimension of officers' wellbeing. For example, martial arts and mindfulness exercises that are often associated with the practice may help buffer the chronic stress of the job and further reduce reliance on bias during high-stress situations. ■

"...ideally, school districts should make reducing implicit bias a priority backed up with money, policy, and training."

JILL SUTTIE, 2016 [74]

3 Education

While education is not always a strong area of implicit bias literature, this year's contributions to the field spanned a considerable range of topics, with a particular emphasis on bias mitigation.

Perceptions of (Mis)Behavior
A Yale University Child Study Center study included two separate tasks to examine how implicit biases of teachers may contribute to discipline disparities evidenced in early childhood education. [75] The study took place at a large early education conference, with teachers and student teachers comprising the majority of the 132 participants. During the first task, the participants identified instances of challenging behaviors during a short video screening of preschoolers, including clips with a Black boy, a White boy, a Black girl, and a White girl. Although participants were primed to attend to challenging behaviors, the children only engaged in typical activities and did not misbehave. During the screening, an eye tracker measured participants' gazes. In general, participants looked longer at Black children compared to White children; this finding was most pronounced for Black boys. [75]

During the second task, participants read a vignette about a preschooler's behavior in which the child's race (Black or White), gender (boy or girl), and background information on the student's family environment (included or not included) were randomized. After the task, participants rated how severe the behavior was

"this research reinforces how implicit biases can influence how student behavior is perceived"

and the degree of hopelessness they felt toward improving the child's behavior. Finally, participants indicated whether they would suspend or expel the child, and if so, what the proposed the duration of the consequence should be. In general, participants rated White students' behavior as more severe than Black students' behavior; however, a complex relationship emerged when considering the race of the participants and the presence of background information. Results showed that when the race of the participant and the student in the vignette was the same,

Race Matters... And So Does Gender

BY ROBIN A. WRIGHT

In her latest report *Race Matters... And So Does Gender*, Kirwan researcher Robin A. Wright conducted an intersectional examination of implicit bias in Ohio school discipline disparities across ten academic years (2005–06 to 2014–15). Here are some key findings.

Black girls need our attention too

Given that the bulk of public conversation regarding school discipline centers around the Black male experience, it is important to note that Black girls experienced a greater level of over-representation within the same-sex disciplined population vs. their same-sex enrolled population than any other demographic group—including their Black male counterparts. Black girls were approximately 3.16 times more represented among the disciplined female population than they were among the total female population. In comparison, Black males—the only other group to experience meaningful over-representation—were 2.65 times more represented among disciplined male student population than the enrolled male student population.

While implicit bias may disadvantage some students, it advantages others
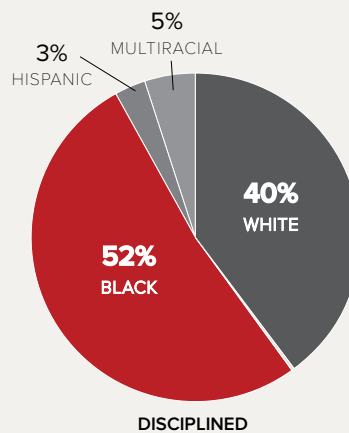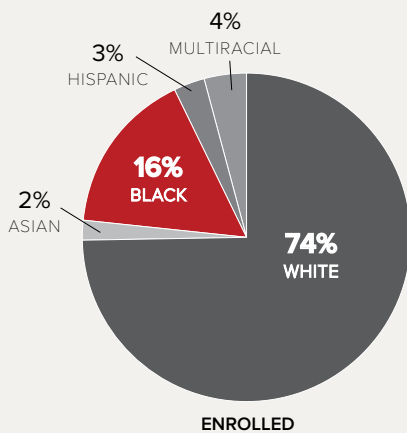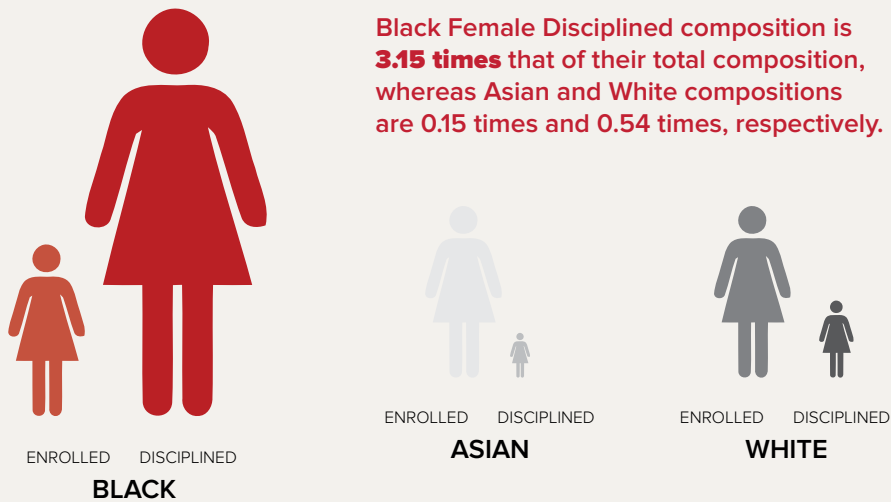
While Black students tended to experience over-disciplining, Asian and White students experienced a composition among same-sex disciplined students that was only a fraction of their composition among enrolled same-sex students. This may be due to a dynamic known as unconscious confirmation bias: the tendency to unconsciously seek out things that align with one's unconscious beliefs while "over-looking" those things that don't [1]. An analysis of qualitative research produced several anecdotal examples in which students recalled this dynamic happening across racial lines:

> I think security guards, just like, I think they like point out African Americans a lot more than like White... Like I'll walk down the hall without a pass, and they'll just let you go. But then they'll find someone else and say, 'You have a Saturday detention [2].'

A gender-variant analysis of racial school discipline disparities is imperative: The interplay of race and gender produces unique educational experiences for Black boys and Black girls. Specifically, research suggests that for Black boys, primary drivers of over-disciplining are related to perceptions of behaviors that may be distorted based on cultural misunderstandings [3], and racialized perceptions of criminality [4, 5]. Alternatively,

Comparison of Racial Representation Among Enrolled vs. Disciplined Females
Averaged, 2005–15 Academic Years

ENROLLED   DISCIPLINED
BLACK

ENROLLED   DISCIPLINED
ASIAN

ENROLLED   DISCIPLINED
WHITE

Black Female Disciplined composition is 3.15 times that of their total composition, whereas Asian and White compositions are 0.15 times and 0.54 times, respectively.

4%
MULTIRACIAL

3%
HISPANIC

16%
BLACK

2%
ASIAN

74%
WHITE

ENROLLED

5%
MULTIRACIAL

3%
HISPANIC

40%
WHITE

52%
BLACK

DISCIPLINED

research indicates that Black girls' inability to embody "traditional" White, middle-class expectations of femininity leaves them vulnerable to assertions of disruptiveness and disobedience—the leading category of disciplinary action for all students [6, 7].

Wright's report concluded with a list of individual and institutional level recommendations schools and school districts can enact to move beyond the unwanted affects of implicit bias and promote a safe and equitable learning environment.

1. Ross, H., Everyday Bias: Identifying and Navigating Unconscious Judgments in Our Daily Lives. 2014, Lanham, MD: Rowman & Littlefield.
2. Lewis, A.E. and J.B. Diamond, Despite the Best Intentions: How Racial Inequality Thrives in Good Schools. Transgressing Boundaries: Studies in Black Politics and Black Communities, ed. C. Cohen and F. Harris. 2015, 198 Madison Avenue, New York, NY 10016: Oxford University Press.
3. Weinstein, C.S., S. Tomlinson-Clarke, and M. Curran, Toward a Conception of Culturally Responsive Classroom Management. Journal of Teacher Education, 2004. 55(1): p. 25-38.
4. Goff, P.A., et al., The Essence of Innocence: Consequences of Dehumanizing Black Children. Journal of Personality and Social Psychology, 2014. 106(4): p. 526-545
5. Todd, A.R., K.C. Thiem, and R. Neel, Does Seeing Faces of Young Black Boys Facilitate the Identification of Threatening Stimuli? Psychological Science, 2016. 27(3): p. 384-393.
6. Blake, J., et al., Unmasking the inequitable discipline experiences of urban Black girls: Implications for urban educational stakeholders. Urban Review: Issues and Ideas in Public Education, 2011. 43(1): p. 90-106.
7. Blake, J., B.R. Butler, and D. Smith, Challenging middle-class notions of femininity: The cause of Black female's disproportionate suspension rates, in Closing the School Discipline Gap: Equitable Remedies for Excessive Exclusion, D.J. Losen, Editor. 2015, Teachers College Press: New York, NY.

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the participant would rate the behavior as less severe when the background information was included and more severe with no information present. The opposite was true when the participant's race did not match the race of the student; in that context, participants rated student's behavior as more severe when the background information was present. Only participant effects influenced the decision to suspend or expel, where Black participants were more likely to call for disciplinary action than White participants. Together, this research reinforces how implicit biases can influence how student behavior is perceived.

Exploring the sources of racial disparities in school discipline, Wright (2015) analyzed longitudinal data to see whether a teacher's race influenced perceptions of students' behaviors. Wright's analysis utilized data from the Early Child Longitudinal Study (ECLS), which began

> "findings showed that Black students were much more likely to have externalizing behaviors recorded than White, Hispanic, or Asian students were"

in 1998 and tracked approximately 20,000 students from kindergarten to fifth grade. As part of the ECLS, teachers identified the degree that students engaged in disruptive behaviors such as arguing, fighting, acting impulsively, etc.—what the questionnaire described as "externalizing problem behaviors." [76]

Wright examined whether teachers' rating of disruptive behavior differed if they belonged to the same racial group as the student (matched-race) versus if they were a different race. When looking at these differences, Wright controlled for teachers who may be more strict or lenient by looking at the teacher's average ratings of the whole class as well as the average ratings that each student received from other teachers. In general, the findings showed that Black students were much more likely to have externalizing behaviors recorded than White, Hispanic, or Asian students. [76] More importantly, the data

showed that if Black students were matched with a teacher of the same race, this disparity in externalizing behavior decreased. [For more on the effect of same-race teachers, see 77.] In fact, roughly half of the White-Black disparity was reduced when Black students moved to matched-race classrooms; this same-race protective factor was not present for Hispanic or White students. However, if the student was subsequently moved to a classroom where there was a race mismatch with the teacher, the improvement in externalizing behavior did not continue in the new setting. As such, the authors attributed this data to differences in teachers' perceptions of student behavior rather than changes in the behaviors themselves.

Academic Achievement

Seeking to establish a stronger link between teachers' implicit biases and students' academic performance, Jacoby-Senghor and colleagues examined how instructors' implicit biases can impact their teaching performance. [78] They grouped over 200 Black and White participants into cross-race or same-race dyads. From each dyad, one White participant would be selected to serve as an instructor while the other dyad member (either Black or White) would be assigned to the role of learner. Instructors' implicit racial attitudes were measured through the subliminal priming task [for more on this task, see 79], as well as their explicit attitudes and behaviors. Focusing on the learners' performance on a subsequent test of the material, results showed that teachers' implicit pro-White biases predicted lower test scores for Black but not White learners. [78] A closer look at the data related to teachers' behavior suggested that teachers' anxiety might mediate this relationship. Thus, to examine whether teachers' anxiety or Black students' perception or fear of discrimination (i.e., stereotype threat) predicted the lower test scores, the researchers conducted a second study with non-Black participants who watched videos of the instruction given during the first study. Jacoby-Senghor et al. found that teachers' implicit biases still mediated learning outcomes when the students were non-Black. Thus, the authors proposed that both anxiety

Implicit Bias Strategies

Addressing Implicit Bias in Early Childhood Education

BY KELLY CAPATOSTO

Early interventions have often been heralded as a critical leverage point for ensuring that students' educational opportunities are maximized. The value of education for youth goes far beyond content knowledge as it fosters artistic, emotional, and relational growth. Nevertheless, a student's brilliance, creativity, and hard work fail to serve a function if the opportunity to utilize those gifts is absent. Thus, we must strive to break any barriers to success as early as possible in order for youth to reach their full potential.

FRAMEWORK: ORGANIZATIONAL AND INDIVIDUAL RECOMMENDATIONS TO ADDRESS IMPLICIT BIAS IN EARLY CHILDHOOD EDUCATION

As one of these potential barriers, this document draws from research on the concept of implicit bias and offers practical solutions to counter its effects on an organizational and individual level.

Pulling examples from the full report, below is a short list of recommendations to mitigate implicit bias in early childhood education:

School Wide and Organizational Strategies:
a.) Decision-Making Practices
  * *Data-based decision making*

b.) Staff Culture & Development
  * *Using professional development time to provide opportunities for education on implicit bias and other types of cultural competency-focused training*
  * *Creating an atmosphere where staff can identify, discuss, and find solutions for instances of bias*

Student Level Strategies:
a.) Classroom Dynamics
  * *Facilitating intergroup contact between peers*
  * *Utilizing interventions focused on stress reduction*

b.) Decrease Ambiguity in Behavior Management & Discipline
  * *Provide examples of behavior expectations in measurable terms, and ensure they are highly visible throughout the school*

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Ohio Discipline Data

An Analysis of Ability and Race

In light of research demonstrating the negative trajectories for students who are chronically suspended or receive similar consequences, Kelly Capatosto from the Kirwan Institute explored the landscape of discipline outcomes for Ohio students through an analysis of statewide discipline trends spanning the 2005–2013 academic years.

BY KELLY CAPATOSTO

The national educational landscape, as well as our previous work, has placed special emphasis on acknowledging the existence of racial disparities in school discipline. As a way to expand the discipline literature to be more inclusive of multiple identities, this report provides a framework for how these discipline trends also affect students with disabilities.

KEY FINDINGS OF THIS ANALYSIS INCLUDE:
School Discipline Outcomes Vary Between Students With and Without Disabilities, and Within Disability Category

In general, students with disabilities received more disciplinary actions than their non-disabled peers in Ohio from 2005–2013. Additionally, consistent patterns emerged between the amount and type of discipline used by each disability category across time, and the rates of discipline varied greatly between disability categories.

"students with disabilities received more disciplinary actions than their non-disabled peers in Ohio from 2005–2013"

THE INTERSECTIONALITY BETWEEN DISABILITY STATUS AND RACE AFFECTS DISCIPLINE OUTCOMES
A complex relationship emerges when considering both race and ability status on trends in school discipline. To illustrate, the greatest discipline disparity between disabled and non-disabled peers existed for White students. White

**MEAN OF ALL DISCIPLINE ACTIONS FOR DISABILITY
AND RACIAL GROUP (PER 100 STUDENTS)**

Disability Category	Asian	White	Black	Hispanic	Multi-Racial
Cognitive Disabilities	98	35.1	99	44.5	51.1
Emotional Disturbance	17.1	98.7	167.8	116.7	139.1
Other Health Impaired - Minor	14.1	40.4	117.2	49	65.8
Specific Learning Disabilities	21.1	32.1	97.9	41.5	53.6
Traumatic Brain Injury	5.7	24.3	66	26.9	27.1
Disability: Average	**31.2**	**46.1**	**109.6**	**55.7**	**67.3**
No Disability: Average	**5.6**	**13.1**	**65.1**	**22.1**	**28**

students with disabilities received 3.1 times more disciplinary actions than Whites in the general education population. However, when comparing across racial groups, it is clear that ability status alone is only a small piece of the puzzle. Though Black students with disabilities were disciplined at rates relatively similar to the non-disabled population of Black students (1.6 times more), Black students without disabilities were disciplined nearly 40 percent more than White student with disabilities, on average. The intricate relationship between race and ability yields a wide continuum of discipline outcomes. In fact, when examining outcomes across the various intersections of both race and ability status, discipline occurrences for every 100 Ohio students range from 5.7 to a startling 167.8 incidents.

This disproportionate discipline of students with disabilities and students of color is a fundamental barrier to educational opportunity access, and one cannot dismiss the challenge of ensuring equitable discipline and academic benefit for all minority youth. As such, confronting the implicit and structural biases that perpetuate inequality can contribute to meaningful progress in the field and increase the presence of opportunity for future generations.

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and the decreased lesson quality that resulted from teachers' implicit biases predicted worse test performance.

Higher Education

Affirmative action policies have remained controversial in the public sphere for applying specifically to race as opposed to economic status. Those in opposition to Affirmative Action often view the policy as a form of "reverse discrimination" against poor Whites. Amidst these criticisms, an article in the UCLA Law Review Discourse uplifted the role of implicit racial bias as part of their supporting argument that, regardless of economic class, Black students face unique barriers to success in higher education. [80] Thus, this analysis focused on admissions for middle-class Black students and included several ways in which the research demonstrates how education professionals' implicit biases negatively impact the educational experiences of Black students, such as assessments of academic performance, writing evaluations, letters of reference, and résumé reviews. [80]

Other Contributions

Drawing from a series of town hall meetings across the country, the American Bar Association Joint Task Force on Reversing the School-to-Prison Pipeline issued a preliminary report and recommendations [81]. In each of these meetings, a primary focus was addressing the role of implicit bias in maintaining the school-to-prison pipeline. Among other factors contributing to the school-to-prison pipeline, the authors implicated implicit bias for inhibiting students' academic performance, influencing disciplinary outcomes, predicting perceptions that students are threatening, and influencing the warmth of interactions with students who are from a different cultural group. Thus, the report recommended training for various actors along the school-to-prison pipeline (e.g., educators, resource officers, juvenile judges) on ways to mitigate bias.

01   BEYOND THE BLACK/WHITE BINARY

In a short newsletter article, Alex Madva examined implicit anti-Latina/o bias in the context of philosophy. [82] He outlined the dearth of knowledge about implicit anti-Latina/o bias and cautioned against the tendency to assume that knowledge about anti-Black/pro-White implicit biases are transferable to Latina/os. Madva also discussed how implicit biases may contribute to the marginalization of Latin American philosophy, philosophers, and students, which ranged from teachers' implicit biases in student interactions to curriculum-related decisions. After reflecting on approaches for addressing implicit biases, Madva's discussion concluded by considering the notion of *mestizaje* as a way to emphasize commonalities and differences (i.e., various aspects of dual identities) as part of an intergroup contact intervention to mitigate implicit biases. [82]

GENERAL MITIGATION STRATEGIES

Implicit Bias Mitigation

To equip early childhood and elementary teacher candidates with the skills to teach a diverse classroom, a 2016 report shared a series of educational activities designed to bolster candidates' cultural humility. [83] As a critical component of this education experience, implicit bias was addressed through these activities as a way for teaching candidates to have a greater awareness of diversity issues. For example, the first activity asked the teacher candidates to self-assess their own biases and expectations and to consider how these may play a role in their classroom. Following these assessments, candidates read a case study of a student's educational experiences and discussed recommendations for assisting the student with their colleagues. During this discussion, participants were asked to identify implicit biases or assumptions that they hold. Among other ideas, the authors uplifted strategies for developing "cultural competence vis-à-vis cultural humility

From Punitive To Restorative

Advantages of Using Trauma-Informed Practices In Schools

BY KELLY CAPATOSTO

WHAT IS TRAUMA?

According to the American Psychological Association, trauma is broadly defined as "an emotional response to a terrible event..." characterized by short-term emotions, such as "shock" or "denial," as well as a range of long-term responses, such as volatile emotions, recurrent flashbacks, and relationship strain. However, Kirwan seeks to expand this definition to acknowledge the individual and interpersonal variation in how we all process, experience, respond to, and treat trauma. This report focuses on the relationship between race and three interrelated components: 1) the experience of a traumatic event (or series of events), 2) the brain's response to trauma, and 3) the manifestation of trauma.

OUR FRAMEWORK: INTERSECTION BETWEEN INDIVIDUAL AND SYSTEMIC TRAUMA FOR RACIAL MINORITY YOUTH

Youth of color are disproportionately at risk for experiencing traumatizing events due to race-based inequity. In examining the root of this disproportionality, this report acknowledges the intersection between individual and systemic trauma. Structural racial inequities are a key reason why minorities have a heightened risk for traumatic experiences, which—on the surface— can appear race-neutral. The most salient example of this added risk is the frequent subjugation of people of color to lower socioeconomic status (SES) compared to their White counterparts through a history of perpetual denial of opportunity. For example, the current racial divide in neighborhood wealth and home equity can be traced back to discriminatory housing and lending practices such as redlining, which limited the ability of Blacks and other racial minorities to purchase housing and restricted housing options to segregated neighborhoods. Minority youth are overrepresented in economically depressed areas; thus, they are more likely to encounter neighborhood-level social and physical environmental stress than Whites. Latino and Black youth are significantly more likely to have someone close to them murdered than are their White peers. Community-level trauma may also emerge from the collective experience shared in response to instances of racism. As a general example, neighborhood violence that is associated with racial tension broadly affects individuals who identify as that racial group, not just those who were immediate victims.

For more information related to the definition and experience of racialized trauma, and how schools can engage in bias-conscious practices to heal trauma and improve student opportunity, see the full report at go.osu.edu/B3h5.

Download full report at **http://go.osu.edu/B86X**

AUTHOR REFLECTION

Sarah Mamo

KIMBERLY BARSAMIAN KAHN, PHILLIP ATIBA GOFF, AND JACK GLASER EXPLORED how "psychological identity-related threats and subtle forms of racial bias may affect authority figures' interactions with adolescents" (p. 190), described as impediments to students' success in the classroom and in society at-large. The researchers implemented an intervention to reduce the biases of authority figures, masculinity threat especially. In their findings, the authority figures learned of the negative impact of implicit biases on students' lives, thus concluding with the success of scenario-based training in combating both implicit bias and masculinity threat.

What I really appreciated about this article was its extension beyond the personal aspects of implicit bias and into structural aspects. Recognizing that implicit bias originates from the top of social hierarchies to disseminate through the social world is of utmost importance. The pervasiveness of implicit bias throughout a society where most people do not strive to be of malicious intent inevitably brushstrokes personal experience with implicit bias, but lacking a structural perspective of implicit bias makes it impossible to eliminate implicit bias from our society once and for all.

I think that understanding the origins of an issue is key to eradicating society of that issue. Granted, societal issues such as racism and implicit bias have grown in complexity and magnitude from their origins, but origins provide insight to the purpose of the issue and allow us to track its development over time. Who does it benefit? Who does it not? How? Why? Plainly said, by starting to answer these seemingly simple questions we can have better perspective for producing solutions for social inequities, particularly within institutions that value authority and a high degree of hierarchical power.

By exploring the effects of implicit biases through top-down interpersonal relationships between authority figures and students, the researchers provided a rigorous intersectional analysis of the utilization of race and gender in the production and propagation of stereotypes and prejudice. In the article, the researchers paired their analysis of implicit bias with masculinity threat—how the perception of a challenge to one's masculinity may cause defensiveness, and can ultimately lead individuals to behave in ways that endorse stereotypes and biases. (For more on masculinity threat, see Smith (2016).)

To combat implicit biases effectively, we must do so on the individual level, but we cannot overlook their origins. Looking only to individual solutions simply re-paints the canvas of implicit bias, missing the fact that someone had to place the canvas there in the first place. Simply put, individual solutions improve our personal interactions, but they do not absolve the need to find absolute solutions. As a major takeaway from this article, we should seek out the origins of implicit bias and produce solutions that go beyond bettering lives in the here and now: we need to find solutions that will make major inroads to eradicate the structural forces that form our implicit biases in the first place.

ARTICLES MENTIONED: Kahn, K. B., Goff, P. A., & Glaser, J. (2016). Research and Training to Mitigate the Effects of Implicit Stereotypes and Masculinity Threat on Authority Figures' Interactions with Adolescents and Non-Whites. In R. J. Skiba (Ed.), Inequality in School Discipline: Research and Practice to Reduce Disparities (pp. 189-205). New York, NY: Palgrave Macmillan US.
Smith, R. J. (2015). Reducing Racially Disparate Policing Outcomes: Is Implicit Bias Training the Answer? University of Hawaii Law Review, 37(295).

in teacher candidates by uncovering their implicit biases and reflecting on observations of differing cultural and familial backgrounds." [83]

Building on prior work addressing the intersection of implicit bias and masculinity threat in criminal justice and school discipline,

Kahn, Goff, and Glaser investigated how these concepts may negatively affect authority figures' interactions with adolescents. [84] The researchers applied their analysis to students' interactions with teachers, administrators, and police officers, and they highlighted examples where perceived identity threat and implicit

bias may contribute to punitive outcomes that disproportionately affect students of color. As part of their national pilot project to combat the effects of masculinity threat and implicit bias, the researchers developed a multi-stage intervention aimed at addressing authority figures' perceptions of and interactions with students. For the baseline phase, participants' implicit attitudes were measured with an IAT, and their explicit attitudes on race and masculinity also were assessed. The intervention phase included both trainings and interactive scenarios to help increase participants' awareness and engagement around these issues. As part of the intervention's content, authority figures learned the negative impact of implicit biases and masculinity threat on students' expectations, learning supports, and punitive discipline outcomes. Though the pilot is ongoing, the authors uplifted these strategies as a template for other educational and justice settings that are en-

"faculty can highlight the work of marginalized students to normalize their presence in the field, combat stereotype threat, and use a relevant shared positive social identity to set a tone of inclusivity"

gaged in equity work. This study also connects to prior work examining masculinity threat in the context of implicit bias research. [85]

Turning to higher education, with the goal of combating implicit biases on college campuses, Gieg completed a literature review of ten neurological studies about how individuals unconsciously process information about people from racial outgroups. [86] Based on this review, she proposed three specific ways to confront implicit racism in the student body: facilitating intergroup contact, using the contact hypothesis, and directing students to cognitive behavioral therapy (CBT) resources. The first recommendation focused on students "relearning" the associations they have toward outgroup members, while the second promoted expanding ingroup membership; both of these can be achieved by designing campus activities to facilitate collaboration and positive interaction

between students of various races and ethnicities. The final recommendation involved the use of CBT to help students acknowledge and work through the implicit biases they possess, with an ultimate goal of cultivating allyship against racism.

In an article addressed to faculty in the science, technology, engineering, and mathematics (STEM) fields, Killpack and Melón presented a perspective for making STEM classrooms more inclusive in a threefold approach of confronting privilege, implicit biases, and stereotype threat. [87] To combat the danger that unchecked biases pose to the institutional culture of STEM programs, Killpack and Melón argued that the professional development of faculty should expand discussions of diversity. Generally, this approach should confront and acknowledge implicit bias by recognizing its role in preventing diverse STEM students' success, both in the classroom and in the process of seeking employment. Included in the researchers' recommendations to mitigate implicit bias was recognizing the importance of taking the Implicit Association Test (IAT) as a way to raise awareness of the biases that impact women and minorities in STEM fields. Also in their recommendations was engaging in diversity-focused education practices and focusing on data-driven approaches to academic decision-making. Furthermore, the researchers provided prompts as part of a pedagogical approach to guide reflection on implicit bias. For example, they prompted instructors to consider how the design of their coursework and teaching practices may be impacted by implicit bias. Finally, they recommended that faculty can highlight the work of marginalized students to normalize their presence in the field, combat stereotype threat, and use a relevant shared positive social identity to set a tone of inclusivity. Killpack and Melón's work relates to previous scholarship that considered implicit bias, STEM, and, in the case of these articles, gender. [see, e.g., 88, 89] ∎

"...the patient has his or her own moral, ethical, and legal right to expect compassionate care that is not compromised, consciously or unconsciously, by harmful human biases on the part of the clinician."

AUGUSTUS A. WHITE III AND BEAUREGARD STUBBLEFIELD-TAVE, 2016 [90]

4 Health

As characterized by the Hippocratic Oath, medical professionals wholly embrace altruistic principles. As detailed in this chapter, however, these noble aspirations may be challenged by implicit biases, regardless of espoused egalitarian intentions.

Doctor-Patient Communication
Research from 2016 continued to acknowledge and examine the ways in which physician implicit racial biases may impact communication between doctors and patients, with a particular emphasis on racially discordant medical interactions.

Focusing on interactions between non-Black oncologists and their Black patients with an eye toward patient responses to physician treatment recommendations, Penner and colleagues had a small sample of Detroit-based oncologists take the race IAT and also videotaped the oncologists' interactions with 112 Black cancer patients. Research staff rated the oncologists' interactions, and patients shared their experiences with their oncologist via measures of perceived patient-centeredness. Results indicated that oncologists had small to moderate but statistically significant levels of implicit racial bias. Notably,

patients of oncologists with higher levels of implicit bias found their medical providers less patient-centered, which negatively affected the patients' confidence in treatment recommendations. [91] This research furthers existing narratives around how doctor-patient interactions can be negatively impacted by implicit racial biases, particularly prior work by Hagiwara that also considered racially discordant communication in health care contexts. [92–96]

While previous literature has shown how non-Black physicians' implicit biases can affect their communication with Black patients [95], little was known about the precise nuances of communication that yielded these effects. Responding to this gap in the literature, Hagiwara and colleagues studied how non-Black physicians' implicit racial bias related to their word choice when interacting with Black patients. Researchers identified two main predictions based on previous scholarship. First, they predicted that physicians with higher implicit racial bias would tend to use first-person plural pronouns (e.g., we, us, our) more often than first-person singular pronouns (e.g., I, me, my) in comparison to their professional counterparts with lower levels of implicit racial bias. Second, Hagiwara et al. predicted that anxiety-related words (e.g.,

worry, nervous) would be used more often by physicians with higher implicit racial bias than those with low during these racially discordant conversations.

Using a sample of 14 physicians from a primary care clinic in a large Midwestern city and their video-recorded interactions with 117 Black patients, the researchers used Linguistic Inquiry and Word Count (LIWC) software to analyze conversation transcripts. Physicians also completed a race IAT, as well as two measures of explicit racial bias. Consistent with the researchers' predictions, findings indicated that physicians with higher implicit racial bias were not only more likely to use first-person plural pronouns but also anxiety-related words. [97] Although the study authors acknowledge some limitations (e.g., a physician sample of largely self-identified Asians), this article expands our understanding of racially discordant doctor-patient interactions by shedding light on some of the verbal nuances that, influenced by implicit racial bias, affect these medical encounters. [97]

"physicians who fit the profile of aversive racists (high implicit bias in combination with low explicit bias) were perceived to display less positive affect and more negative affect than their counterparts of other implicit/explicit bias combinations"

Following the same thematic interest as Hagiwara and colleagues' work on how physicians' racial bias can affect racially discordant medical interactions, another 2016 article by Hagiwara et al. examined physicians' implicit and explicit racial bias, as well as patients' perceived discrimination on their own and each others' behaviors. Researchers used a "thin slice method" in which observers assessed individuals' behavior via brief video excerpts from larger interactions between 113 Black patients and 13 non-Black primary care providers. Physicians also completed a race IAT and two explicit racial bias measures; patients completed assessments on past perceived discrimination. Finally, external raters used various rating scales to measure affect and engagement seen in the thin slice video excerpts.

Findings indicated that both physicians' affect and engagement were impacted by their implicit and explicit racial biases when they interacted with patients reporting prior discrimination, but not if the patient did not note prior discrimination. [98] Notably, physicians who fit the profile of aversive racists (high implicit bias in combination with low explicit bias) were perceived to display less positive affect and more negative affect than their counterparts of other implicit/explicit bias combinations, which aligns with prior findings by Penner and colleagues. [92] In terms of patient behavior, perceived discrimination was found to influence patient affect. [98] As a whole, this study adds to our understanding of implicit bias in the context of doctor-patient interactions by finding that physician bias and patient perceptions of discrimination affect racially discordant medical interactions both individually and jointly. [98]

SCHOLARSHIP RELATED TO CHILDREN

Implicit Bias and Health Care Involving Youth
Recognizing that health care settings can often be hectic environments featuring stress, fatigue, time pressures, and other factors that can increase cognitive load, previous research has considered the notion that this environment may be conducive to biases. [99] A 2016 article by Johnson et al. sought to determine whether physician implicit racial biases changed after working a shift in a pediatric emergency department and to understand better how cognitive stressors encountered during a shift affect these outcomes. Cognitive stressors included measures of fatigue, number of patients cared for during the shift, shifts worked in the last week, department busyness/overcrowding, and other measures. The largely non-Hispanic White participants were resident physicians at an academic pediatric emergency department who completed assessments of implicit and explicit racial bias before and after working a shift. Findings indicated that, contrary to the researchers' hypotheses, levels of implicit racial bias remained consistent pre- and post-shift; there was no significant difference in IAT scores before or after a shift of work. [100] In terms of cognitive stressors, however, sub-analysis

results suggested that emergency department overcrowding and a higher patient load were associated with an increase in implicit racial bias post-shift, thus lending further support to the notion that cognitive stressors may affect implicit bias. More generally, this article also adds to the growing body of studies indicating that health care providers hold implicit racial biases [93, 101–106], which, in this study were found to be more than three times greater than the residents' explicit biases. [100]

Using the data gathered in the study discussed immediately above this paragraph, Johnson and colleagues performed a secondary analysis of their data from residents at a pediatric emergency department to examine any differences in their implicit racial attitudes toward children versus adults, as well as whether various demographic characteristics were associated with these attitudes. The foundation of previous literature had already established that, like the general population, health care providers tend to hold pro-White/anti-Black implicit biases [93, 94, 101–103, 106–108], with pediatricians also

"implicit bias that can harm outcomes for pediatric patients, including racialized health disparities, stereotype threat, racial microaggressions, and language use"

being susceptible to this same trend [100, 109], though perhaps at a slightly lower level than other populations. [109] Using both the adult and child race IATs, Johnson and colleagues revealed no significant differences in levels of implicit bias between these two IATs among participants, and none of the resident demographic characteristics was associated with scores on either IAT. [110] Recognizing the implications of their findings, the authors note that children are thus vulnerable to their health care providers' implicit racial biases, and that this finding may have an effect on inequities in pediatric health care.

In a reflective piece on pediatric ethics, Lang et al. uplifted implicit racial bias as a contributor to the "historical, institutional, and social harms already being experienced by children and their

Unconscious Bias in Academic Medicine

Proceedings of the Diversity and Inclusion Innovation Forum

With mutual interests in unconscious bias, the Association of American Medical Colleges (AAMC) partnered with the Kirwan Institute in 2014 to host a Diversity and Inclusion Innovation Forum on unconscious bias in academic medicine. The goal was to discuss the impact of implicit bias in academic medicine and share interventions to mitigate unconscious bias in academic medicine institutions.

KEY FINDINGS AND ANALYSIS

Each forum discussion focused on a particular aspect of unconscious bias and medicine. The seven topic areas were: medical school admissions; undergraduate medical education; resident recruitment and selection; faculty recruitment, selection, and hiring; faculty mentoring; faculty advancement, promotion, and tenure; and patient care.

Part of each discussion was dedicated to how the unconscious affected the topic of conversation, and the latter portion of the day was dedicated to assessing existing efforts to promote diversity and inclusion and mitigate bias. Across all of the conversations, several common themes emerged: the nebulous notion of who does or does not "fit" into an institution; the operation of confirmation bias; unconscious bias as a two-way dynamic; the lack of diversity in academic medicine; the unconscious "othering" of minorities; diversity being unconsciously underappre-ciated; and the undervaluing and overburdening minority faculty.

Forum attendees recommended particular interventions with the intention of creating a reflective climate that acknowledges bias and the effect it can play in institutional climate, policies, and decision-making.

"Participants stressed that bias can be mitigated through education and training of individuals and teams"

Participants stressed that bias can be mitigated through education and training of individuals and teams; the Implicit Association Test, role-playing, and blinded studies were identified as useful aides in this process. Lastly, forum attendees recommended that diversity be reflected at every institutional level of high-stakes decision-making, such as admissions, appointments, and tenure. Each committee or team involved in these decisions should be diverse in composition and identify clear requirements and interview questions prior to any selection process.

The full proceedings of the forum are compiled in the monograph, Proceedings of the Diversity and Inclusion Innovation Forum: Unconscious Bias in Academic Medicine, for application throughout academic medicine today.

Download full report at **http://go.osu.edu/B86X**

families in the United States." [111] Recognizing that pediatric healthcare professionals embrace the principle of beneficence while still being susceptible to implicit biases, the authors discussed four possible manifestations of implicit bias that can harm outcomes for pediatric patients, including racialized health disparities, stereotype threat, racial microaggressions, and language use. Lang and colleagues also noted how recipients of negative implicit bias can experience chronic psychological stress and an increased allostatic load, both of which can contribute to poor health outcomes later in life. The authors closed with a powerful message compelling health care professionals to examine their role in the operation of implicit racial bias and reiterate the obligation to work to eliminate these biases. They movingly contextualized this "duty," asserting:

> Additionally, weighing the potential gravity of harm to children against the negligible burden on pediatric healthcare professionals to address implicit racial bias, it seems to us that we ought to readily accept this responsibility. There is no corresponding harm to pediatric healthcare professionals in identifying and taking action to resolve the implicit racial biases we hold, other than to our individual consciences—and egos. [111]

Medical School

Recognizing that implicit racial biases can affect medical school admissions committee members, Capers and colleagues studied the presence and extent of implicit bias among these individuals at The Ohio State University College of Medicine. Results from committee members taking the race IAT as well as reporting on their explicit racial preferences showed that while self-reported explicit preferences were minimal, IAT scores revealed significant implicit White preferences among committee members. [112] After surveying committee members on the value of IAT experience and the extent to which they were mindful of their results during admissions processes, the authors connected these insights to admissions decisions. They found that the class that matriculated immediately following these activities was the most diverse in the

College's history to date, with survey comments supporting the notion that the IAT experience may have yielded committee member behavior modifications. [112]

"taking the IAT during medical school was a statistically significant predictor of decreased implicit bias, whereas having heard negative comments about African American patients from attending physicians or residents during the students' time in medical school predicted increased implicit bias"

In terms of student experiences in medical school, a late 2015 article by van Ryn and colleagues employed a longitudinal study of more than 3,500 medical school students who matriculated into 49 U.S. medical schools in autumn 2010. Medical student participants took the Black-White IAT both during their first semester of medical school in 2010, as well as during their last semester in 2014, to examine any changes in implicit racial attitudes. Findings indicated that taking the IAT during medical school was a statistically significant predictor of decreased implicit bias, whereas having heard negative comments about African American patients from attending physicians or residents during the students' time in medical school predicted increased implicit bias. [113] Similarly, unfavorable contact with African American physicians also increased implicit bias, though the authors noted that the few reported experiences of this unfavorable contact made this finding more tenuous. Together these results support the potential benefit of including implicit bias knowledge in formal medical school curricula while also acknowledging that interracial contact and aspects of the medical school experience beyond the formal curricula (e.g., the "hidden curricula") also shape student experiences.

Mental Health

In the mental health realm, Shin and colleagues sought to understand whether racial bias may be playing a role in the initiation of a mental

health counseling patient-provider relationship. Recognizing that prior research has shed light on the existence of anti-Black implicit biases among counseling graduate students [114] and professionals [115], the authors used an audit study to assess racial bias when prospective clients inquire about a provider's service availability. Researchers used a recording to leave voicemails with mental health professionals in an East Coast, Mid-Atlantic state in which the caller identified herself on a voicemail as either Allison (i.e., suggesting a non-Latina White prospective client) or Lakisha (i.e., suggesting a non-Latina Black perspective client), expressed an interest in counseling services, and provided a call-back phone number. Shin et al. analyzed both the association between the name of the caller (i.e., White-sounding vs. Black-sounding) and call-backs received, as

> "the caller's name was not related to the likelihood of receiving a call-back; however, 'Allison' was significantly more likely than 'Lakisha' to receive a response that invited the potential for services."

well whether the caller's name seemed to affect whether the therapists who called back would promote the potential for counseling services. Results suggested that the caller's name was not related to the likelihood of receiving a call-back; however, "Allison" was significantly more likely than "Lakisha" to receive a response that invited the potential for services. [116] More specifically, "the fictitious client with a stereotypically White-sounding name had a 12% greater chance of having a therapist open the door to potential mental health services by returning her phone call and offering the opportunity to have a conversation, rather than closing the door by failing to return her phone call or leaving a message that declined services." [116] While the researchers caution against extrapolating this finding too far given the small effect size, they reflect that "implicit racial bias among counselors and psychologists should continue to be investi-

gated as a possible factor contributing to the persistent inequitable patterns of mental health service delivery for Black consumers." [116]

01 BEYOND THE BLACK/WHITE BINARY

Cheng et al. utilized several instruments that are often used in implicit bias research to study how the model minority stereotype relates to perceptions of mental health for Asian Americans. [117] The myth that "Asian Americans are more academically, economically, and socially successful than any other racial minority group associated with their supposedly stronger values emphasizing hard work, perseverance, and belief in the American meritocracy" is known as the model minority stereotype. [117] The authors suggested that this pervasive stereotype may be linked to issues in the field of mental health, such as Asian Americans' mental health needs being misdiagnosed or under-diagnosed, as practitioners may associate Asian Americans with elements of the model minority stereotype (such as not having or needing help managing mental health issues). Participants in this study read either: "1) a clinical vignette describing a White college student suffering from adjustment disorder; 2) the same clinical vignette describing an Asian American college student; 3) a newspaper article describing a success story of Whites and the White clinical vignette; [or] 4) the same newspaper article and clinical vignette describing an Asian American." [117] They also took several assessments to measure attitudes toward Asian Americans, racial attitudes/colorblindness generally, and perceptions of the vignette character's mental health. Finally, a memory recall task of the twelve symptoms associated with adjustment disorder—the mental health diagnosis that matched the symptoms displayed by the vignette character—was used to measure how accurately the participant recalled aspects of the vignette. Cheng et al. found that although there was no significant difference between evaluations of the vignettes based upon whether the character was Asian American or White, participants did perceive the vignette character as possessing higher mental health functioning when primed with the model minority stereotype embodied by the newspaper article. [117] Furthermore, irrespective of the

vignette character's race, participants correctly recalled more symptoms of adjustment disorder in the memory recall task when they were primed than when they were not primed. In other words, being primed with a version of the model minority myth was associated with participants less accurately assessing the mental health of a fictional person.

Clinical Decision-Making

Understanding that surgical disparities can take the form of long-term disparate outcomes, not just immediate, recognizable effects, Torain and colleagues embraced the need to extend surgical disparity discourse through a narrative review. [118] The researchers used PubMed to search for quantitative and mixed methods analyses on racial disparities in surgical outcomes. Following the narrative review, the researchers reviewed and categorized the results into a series of five key themes. As one of these five themes, the authors identified health care providers' unconscious biases as a source for surgical disparities. Of primary importance in the review was the role of health care providers' implicit biases and their perceived effect on clinical decision-making. As noted in the study, providers may rely on biases and stereotypes to understand and simplify complex situations; therefore, their biases are associated with clinical decision-making and have long-term implications. Moving forward, the authors acknowledged the need for further research on the relationship between providers' clinical care, implicit biases, and surgical outcomes.

GENERAL MITIGATION STRATEGIES

Addressing Implicit Bias

As part of a narrative overview of implicit bias in health care literature, Zestcott, Blair, and Stone discussed how provider implicit biases may affect health care disparities and considered the status of current training-related efforts to address these biases. The authors recognized two elements for success in training health care providers to reduce implicit bias: "(a) instructors need to translate the abstract, theoretical concepts and processes that support

the effectiveness of the strategies into practical, concrete clinical skills, and (b) instructors need to develop active learning exercises that allow students the opportunity to practice the skills before they use them in the clinic." [119]

In an advice-driven article, White and Stubblefield-Tave reviewed factors other than socio-economics that can contribute to health care disparities for marginalized groups, including unconscious bias. [90] Over the course of 18 guidelines for improving clinician-patient collaborations, the authors recommended that clinicians seek feedback from trusted colleagues regarding any conscious or unconscious biases they may be manifesting during patient interactions.

Acknowledging the significant body of literature that explores how mindfulness may be used to address biases, [120–125] a short article by Burgess, Beach, and Saha proposed mindfulness meditation as an approach to addressing the implicit biases that may be contributing to health care disparities. The authors overviewed the benefits of mindfulness meditation, including how it can: 1) decrease implicit bias, such as by changing brain structures in ways that reduce prejudice; 2) raise awareness of one's biases so that the opportunity for self-regulation occurs; 3) reduce stress and cognitive load; 4) foster empathy and compassion; and 5) improve patient-centered communication. [126] Burgess et al. concluded by considering how mindfulness practices may be taught to health care providers and noted remaining research gaps at this intersection of mindfulness and implicit bias reduction in the context of health disparities.

Other Scholarship

Looking at the intersection of race and gender identity, Jiang et al. sought to explore the implicit biases, explicit biases, and behavioral intentions of Asian females in relation to anti-fat bias. [127] While anti-fat bias has been explored in a Western context to some extent, little is known about anti-fat biases within Asian populations, and even less is known about the possible connection between attitudes and behavioral intentions in relation to this bias. To address

Aligning Outcomes with Intentions

Mitigating Implicit Bias in Health Care

As part of the Kirwan Institute's work on implicit bias, we occasionally aggregate important contributions to a topic to make one of our own, informed by our perspective on implicit bias and its mitigation. One example of this applied work has been in the health care realm. Given the significance of this field, it is notable that a contrast exists between a profession devoted to others' well-being and the reality that racial and ethnic disparities persist in this field, yielding unequal treatment. While many interrelated issues contribute to these disparities, implicit bias is also a consideration.

While the challenges of these unconscious dynamics are not specific to any particular profession, there are attributes of the health care system and interactions within it that make clinicians particularly susceptible to implicit bias. That said, effectively mitigating implicit bias in health care is possible. Two methods that can aid in mitigation are taking the Implicit Association Test and regularly reflecting on one's bias. The former brings unconscious associations to conscious awareness, which is crucial in making an individual self-aware of their biases, and the latter, which can be done individually or in group settings, is an exercise in personal development.

This new website devoted to implicit bias in the health care field offers strategies for bias mitigation (http://u.osu.edu/breakingbias), such

A new website, http://u.osu.edu/breakingbias, offers strategies for bias mitigation.

"there are attributes of the health care system and interactions within it that make clinicians particularly susceptible to implicit bias"

as fostering and increasing motivation toward egalitarian goals, perspective taking and empathy building, mindfulness, and building new associations. Each strategy plays an important role in the overall process of bias mitigation, and the content is specifically tailored to the field of health care, although the general guidance and strategies can be generalized to other occupations, as well.

For more information, including reflective tools to foster a self-evaluation of bias mitigation, please visit: http://u.osu.edu/breakingbias

Download full report at **http://go.osu.edu/B86X**

this existing gap in the literature, the authors had 104 Asian females in Singapore complete three assessments of bias. Participants first answered a scenario-based questionnaire that measured behavioral intentions toward overweight and obese individuals. One example of a scenario that was presented to participants was to imagine that they were a university student and the professor was giving back grades on students' assignments. The participants viewed images of two women who had nearly identical appearances and background information but different BMIs. The participants were asked to indicate how likely they thought it was that each woman had done well on the graded assignment. After completing the scenarios, the participants then took an Implicit Association Test (IAT), as well as the Attitudes Toward Obese Persons (ATOP) scale, which measures explicit anti-fat bias via self-report.

The researchers' findings largely aligned with results from previous studies on implicit bias. Specifically, the analysis illustrated that anti-fat bias exists, that it is strong, and that implicit bias is a better predictor of behavioral intentions than self-reported explicit bias. [127] In an unprecedented result, however, the researchers observed that "…on average, participants explicitly expressed positive attitudes toward overweight and obese individuals which is in contrast to previous findings" (emphasis added). [127] Jiang et al. suggested that this reported pro-fat bias could be due to collectivist social norms in Asia that starkly contrast with individualist social norms in Western countries. The authors indicated that such social norms could have "prevented [the participants] from disclosing anti-fat bias explicitly instead expressing positive attitudes to convey empathy and sensitivity toward an overweight and obese population." [127] Although more research is needed to explore this possibility, the study raised important questions regarding how race and cultural norms may influence the expression of explicit attitudes (including the relativity of social desirability effects) even as unwanted implicit biases continue to influence spontaneous behaviors.

In a largely conceptual contribution, Hall and Carlson expanded a prior definition of marginalization in the realm of nursing by incorporating scholarship on globalization, intersectionality, privilege, microaggressions, and implicit biases. [128] They noted that implicit biases and microaggressions represent "fertile ground for individual nurses and nurse scientists to address" and recommend long-term reflective practices (e.g., journaling) as ways to change automatic associations.

Finally, a 2016 article in *Social Science and Medicine* used data from Project Implicit® to analyze county-level estimates of the explicit and implicit biases that Blacks and Whites hold toward each other. The authors then used that data in combination with county-level death rates for circulatory-related causes of death to examine the extent to which these biases predicted ingroup deaths from this particular cause. Recognizing that the existence of a relationship does not imply causality, Leitner and colleagues found that in counties where Blacks held higher levels of anti-White implicit bias, Blacks passed away at a higher rate from circulatory-related ailments, and this was independent of various county-level socio-demographic factors and Whites' implicit or explicit biases. [129] In contrast, for Whites, explicit biases and ingroup death rates had a more robust relationship than implicit biases did. [129] Thus, while racial bias was associated with negative health outcomes, it appears that implicit dynamics were at the fore for Blacks, whereas explicit bias drove this relationship for Whites. ∎

By introducing implicit bias into understandings of housing market and credit systems, we open up new points of intervention."

JILLIAN OLINGER, KELLY CAPATOSTO, AND MARY ANA MCKAY, 2016 [130]

5 Housing and Neighborhood Dynamics

In 2016, the Kirwan Institute re-emerged as a voice on implicit bias and housing with a report that investigated the implications of implicit racial bias and structural racism on three specific topics directly related to housing: lending practices, not-in-my-backyard (NIMBY) attitudes, and Moving-to-Opportunity (MTO) programs [130]. The researchers considered how structural and cognitive forces interact to perpetuate the false association between race and risk as a way to explain "rational" discrimination. [130] For example, in the area of lending, seemingly race-neutral measures of creditworthiness (e.g., credit score or financial history) can produce racially disparate access to prime lending opportunities. This association between race and risk is maintained through both a long history of discrimination pertaining to credit access and economic mobility for racial minorities and the biases of lending professionals. As a remedy to the influence of implicit bias on disparate housing outcomes, the report presented a host of individual and institutional interventions, such as advocacy for race-conscious housing finance reform and challenging the notion of rationality within the field.

As discussed below, work from other scholars in this realm in 2016 focused on mortgage lending and neighborhood dynamics.

Mortgage Lending

Hanson and colleagues examined the presence of racial discrimination in mortgage lending by sending over 5,000 matched email inquiries to Mortgage Loan Originators (MLOs) across the United States. [131] MLOs exist as a critical part of the loan process, as they have the ability to assist customers and negotiate the terms of the mortgage. The emails varied on three dimensions: credit score (high credit, low credit, or no score indicated), race associated with applicant's name (Black or White), and the greeting used (Hello, Hi, Dear, etc.). The results suggested several ways that MLOs biased their responses in favor of inquiries from those with White-sounding names. First, MLOs were more likely to respond to emails with White sounding names than Black sounding names. In general, MLOs were more likely to respond to emails with a higher credit score regardless of race, but racial differences persisted; MLOs preferred Whites with high credit scores to Blacks with low or no credit score to a much greater extent than they preferred Blacks with a high credit

"...having a Black-sounding name was the equivalent of having a credit score that is lower by roughly 71 points"

score compared to Whites with low or no credit score. [131] This preference meant that having a Black-sounding name was the equivalent of having a credit score that is lower by roughly 71 points. Additionally, MLOs were more likely to send follow up emails to inquiries from Whites than they were for Blacks. The authors concluded that these disparities were more likely to result from implicit biases rather than MLO's explicit intent to discriminate.

Neighborhood Dynamics

Responding to the wave of controversy around neighborhood watch efforts, Godsil and MacFarlane suggested that the interaction between implicit bias and racial anxiety may undermine efforts to promote neighborhood safety. [132] According to Godsil and MacFarlane, this interaction can manifest when neighbors implicitly profile racial minorities as being more dangerous than other individuals. They included several examples of residents calling the police on Black and Latino individuals who were behaving in ordinary ways; for example, losing one's keys was perceived as a break-in and walking around with a cell phone was seen as suspicious behavior. Because of implicit biases, the White residents may feel they are doing a positive service by calling the police. Conversely, minority residents may feel an increased sense of divisiveness or danger. [132] Compounded with racial anxiety, racial divides may occur when implicit biases are operating in this fashion. Notably, the anxiety associated with uniting to solve these biases may further inhibit neighborhood cohesion. ∎

Challenging Race as Risk

Connecting Implicit Bias to Structural Issues

The ability to live in a neighborhood with good schools, safe spaces, and access to the services and supports needed to thrive requires countless individual decisions across institutions, time, and space. In the U.S., these decisions are deeply wrapped up in race—whether you are seen as deserving, a good investment, a safe risk, a worthwhile neighbor. Through a century of law-making, policy-making, and decision-making, we have so thoroughly ingrained an association between race and risk, that this access has decidedly and consistently been withheld from people of color for generations.

The association between race and risk is no accident. Its roots lie in the restrictive covenants and racial zoning of the early 1900s; redlining and White flight of the '30s through the '60s; deregulation and rise of subprime lending in the '70s through the '90s; and reverse redlining and foreclosure crisis of the early 2000s. Every generation, it would appear, has had its own interpretation and manifestation of the race:risk association. Race as risk has infiltrated every aspect of the real estate industry, including government (the FHA and public housing policy); appraisers and real estate agents (blockbusting and devaluations of Black neighborhoods); brokers and banks (predatory lending and reverse redlining); and individuals (deciding who can or cannot be a neighbor or which neighborhood to call home).

We have done a remarkable job of upholding the racial boundary—in our markets, in our neighborhoods, and in our minds. When it comes to housing (and the credit that supports it), there appears something off-limits about it. One study finds that 28% of Whites support an individual homeowner's right to discriminate on the basis of race when selling a home. It seems we don't have to dig too deep to tap into our biases when it comes to our homes.

In 1968, the Douglas Commission called the struggle for freedom of choice and equal opportunity in housing and balanced neighborhoods the "struggle for the soul of America." That struggle remains with us today.

PROGRESS CAN BE MADE

To unwind the race:risk association is no small feat. We have over a century of explicit and deeply disparaging language and policy in the housing market—such negative associations will thus require dedicated and sustained work to undo. Implicit bias research tells us that even merely being exposed to the concept of implicit bias and its impacts produces subtle changes in our perceptions and attitudes, which can impact outcomes. Addressing the structures alone without also taking on the underlying assumptions and attitudes that motivate behaviors and decisions limits our ability to finally, fully deliver on the American Dream.

Download full report at **http://go.osu.edu/B86X**

"gaining awareness of
implicit biases one holds
demands active work."

JOANNE M. HALL AND KELLY CARLSON, 2016 [128]

6 Guarding Against Bias

As the research documenting the effects of implicit biases across multiple domains has grown, so too have inquiries related to mitigating unwanted biases. The academic literature from 2016 extends several previously-established themes in this realm, including intergroup contact and mindfulness.

Intergroup Contact
Previous work by Turner and Crisp demonstrated that imaginary intergroup contact (i.e., visualizing interactions with a member of a social outgroup) can be an effective intervention to address negative implicit attitudes against Muslims and the elderly. [133] As the next step in studying the potential benefit of imaginary intergroup contact, Meleady and Seger examined its effect on pro-social behavior toward outgroup members using three online studies. [134]

01 BEYOND THE BLACK/WHITE BINARY

In the first study, American participants imagined interacting with a person from India or were asked to imagine an interaction with an unspecified person for the control condition. Following the imaginary contact, participants were told they were matched with a partner from India to participate in a prisoner's dilemma exercise in which they had to choose either to cooperate or compete for financial gain. [For more on the prisoner's dilemma game, see 135.] The results showed that participants who imagined contact with an Indian person were more likely to cooperate in the game, whereas those in the control condition were more likely to compete. [134] The second study repeated the same procedure as study one but instead asked Indian participants to imagine contact with an American person for the experimental condition. The results showed that both groups were more likely to compete in the game; however, those who were asked to imagine contact with an American exhibited a greater tendency to cooperate than those in the control condition. [134] The final study was identical to study one except participants had to indicate how much they trusted their partner following the game. Again, the results indicated that those in the imagined outgroup contact condition had a higher proportion of those willing to cooperate than the control condition did. [134] Moreover, the level of trust the participant indicated toward their partner mediated the relationship between imaginary contact and the choice to

cooperate. These findings further bolster the idea that imagining intergroup contact not only affects implicit attitudes, but may also serve as an intervention against discrimination.

Schellhaas and Dovidio overviewed the psychological processes behind intergroup relations with an emphasis on the strengths and limitations of three methods for reducing implicit bias and improving cross-group relationships: decategorization, recategorization, and intergroup contact. [136]

Decategorization and recategorization both refer to practices to alter one's "us vs. them" mentality [136]. Decategorization involves individuation (i.e., seeing individuals on an interpersonal level rather than on a group level), whereas recategorization promotes framing subgroups as part of a larger shared identity, thereby expanding the scope of ingroup affiliation. While shared group membership can reduce negative implicit attitudes toward outgroup members [137, 138], decategorization may prove especially difficult because it goes against humans' automatic tendency to classify or label others. Moreover,

by focusing on improving relationships on an individual level, the positive effects may be difficult to generalize toward the larger group identity. Similarly, the limitations of recategorization include the tension that manifests when integrating aspects of subgroups' identities. In a worst-case scenario, certain subgroups may be seen as a deviation or exception from a group ideal, which will further elicit biases between groups.

Third, intergroup contact's ability to reduce implicit and explicit outgroup bias is well-documented [for examples of work in this realm, see 139, 140–142]; however, existing structures of segregation can make it difficult to bridge the very gap intergroup contact needs to address. Moreover, there are differences in how groups perceive the benefits of intergroup contact based on whether they hold an advantaged or disadvantaged identity. Advantaged groups are more likely to develop increased positive attitudes as the result of intergroup contact than disadvantaged groups are. This asymmetrical benefit is due to the different goals that these

AUTHOR REFLECTION

Lena Tenney

WHAT WILL IT TAKE for White people to truly commit to remedying racial injustice? For some time now, I have been wondering what it will take for White people to move from being largely passive about race and racism to being active, committed, and willing to make sacrifices in order to bring about racial justice. Most White people indicate that they have no racial bias, that they treat everyone equally, that they "don't see race," and even that they are better than average at not being racially biased.[1] While many people believe the United States of America is a place of true equal opportunity—a place where you will succeed regardless of your identity if you simply try hard enough—we also know that this is not reality: the society we live in is far from racially just. We continue to see massive disparities between racial groups in almost every domain of public and private life. What will it take for

a critical mass of White people to move from being *passively not racist* to being *actively anti-racist*? What will it take for White people to move from *self-identifying as an ally* but not necessarily taking action to *acting as a co-conspirator in dismantling White supremacy*? How do we persuade well-meaning White people to take the huge step from being *well-meaning* to being *well-doing*?

As someone who uses research to inform the ways in which I educate myself and other White people about racism, I wonder how we can use seminal and emerging research to strategically shape messaging aimed at persuading well-meaning White people to become active participants in the fight for racial justice. As racial justice educators, how do we use our knowledge (both of academic research and lived experiences) in order to

effectively inform our pedagogy when engaging with well-meaning White people? How can we draw insight from research around White fragility, White rage, and other concepts of Whiteness in order to inform our approaches to racial justice education while at the same time not pander to those very dynamics we are seeking to challenge? How can we effectively reach "moderate Whites" who value order above justice (in the words of Martin Luther King, Jr.) in discussions of race and racism—much less true liberation for all?

Reading Cole's article titled "Thinking through race: White racial identity, motivated cognition and the unconscious maintenance of White supremacy" sparked a number of thoughts for me in regards to this question.[2] For example, I wonder if the differentiation between "White identity goals" and "antipathy for non-White people" might have value in terms of navigating White fragility and defensiveness around racism when attempting to engage well-meaning White people in discussions about race and racism. When we shift our focus away from determining whether the intentions of individual White people are "good" or "bad" to instead focusing on the negative effects of White supremacy, we can focus on what matters most in the fight against racism. The pursuit of White identity goals and antipathy for non-White people are not necessarily different in their impact of perpetuating racial injustice. However, one seems more likely to effectively engage White folks in learning and listening. In other words, is it possible for the mostly semantic difference between 1) the "desire for self-enhancement" and 2) "racism" to be intentionally employed by racial justice educators in order to better engage well-meaning White people?

This is especially pertinent considering the 2016 U.S. presidential election, in which Whites overwhelmingly voted for Donald Trump while maintaining that they are not racist (despite his articulation of racist rhetoric and proposed policies). Clearly many of these voters—who would likely indicate that they believe in egalitarian values—were influenced by their White racial identity and motivated cognitions in their choice to maintain the system of White supremacy. Yet, these same voters would likely agree that they are pursuing self-interest (such as economic security) rather than racism against people of color. So can we employ the

idea of White identity goals to open the door for discussions about race that would otherwise be shut down immediately by the mere mention of the words "racism" and "racists?" This is one example of the questions we can ask as we seek to do racial justice work in intentional ways.

In sum, the research contained in the *State of the Science* and various other outlets—as well sources outside of traditional academia—can provide insight into how we might craft informed strategies for motivating well-meaning White people to take meaningful action to bring about racial justice. We can be thoughtful and intentional as we do the following:

- We can utilize insights from studies, op-eds, blogs, etc. to frame educational conversation in maximally productive ways without watering down content by seeking to make it palatable to White people at the expense of People of Color.

- We can use research and lived experience in strategic ways rather than relying upon the false assumption that empirical facts, data, and graphs will change hearts and minds in isolation.

- We can use storytelling, authenticity, data, intentional pedagogy, and other tools to reach White people and motivate them to take an active role in dismantling White supremacy.

- Recognizing how challenging all of this is to do, we can still recommit ourselves to ensuring our facilitations and everyday conversations are effective, critical, and not upholding White supremacy even as we seek to dismantle it. As Dr. Dafina-Lazarus Stewart asks in zir work, "Whose safety is being sacrificed and minimized to allow others to be comfortable maintaining dehumanizing views?"[3]

We can continually ask these critical questions and employ these thoughtful strategies in order to do better in our work of envisioning and co-creating more equitable, just, and liberatory realities. In challenging times, let us recommit to doing this work—and to doing this work with intentionality.

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1. Howell and Ratliff 2017
2. Cole 2016
3. https://www.insidehighered.com/views/2017/03/30/colleges-need-language-shift-not-one-you-think-essay

groups have for engaging in intergroup contact. In general, disadvantaged groups often desire empowerment and respect for their identities from these interactions, whereas advantaged groups seek validation from disadvantaged groups to appease moral discomfort. The different goals between groups may hinder both from forming positive attitudes.

Finally, the authors noted that changing individuals' attitudes may never manifest as real action to improve societal equity. In fact, positive intergroup interactions may hinder efforts to combat systemic inequities and implicit biases, because they offer a false sense of security and detract from a focus on disparities.

Ingroup and Outgroup Membership

Exploring the notion that group membership may affect implicit biases, Scroggins et al. utilized three experiments to consider how implicit biases toward outgroup individuals may lessen if those outgroup members were recategorized as ingroup members. Using samples of undergraduates, the researchers studied whether the categorization of Black males as members of a shared group (i.e., one's ingroup) would decrease implicit biases toward them. Findings from the first experiment in which Black targets were presented as members of a shared social category—in this case, University of California, Santa Barbara (UCSB) students—indicated that making this ingroup membership salient reduced implicit biases toward Black targets. [137] Further, this decline in implicit bias was found to reflect increased positive attitudes toward Black ingroup targets moreso than a decrease in positivity toward the contrasting group (Whites). Results from a second experiment suggested that a social category reflecting a positive, non-shared identity (i.e., firefighters, in a sample of non-firefighters) was insufficient to reduce implicit biases. In order for this reduction to occur, the social category must represent a shared group (e.g., UCSB students). Finally, a third experiment revealed that this categorization of Black faces as ingroup members implicitly increased the perceived boundaries of what the ingroup constituted. Given that previous literature has examined how social (re)categorization can influence implicit biases

[143, 144], this article concluded that shared ingroup membership is "a particularly appealing practical approach to reducing bias, as positive associations seemed to be conferred as part of ingroup membership." [137]

Counter-stereotypic Training

Another approach for implicit bias mitigation in the scholarly literature is negation, meaning individuals are trained to explicitly reject stereotypical associations, such as by verbally responding "no" when presented with a stereotypic group-trait pairing. A 2000 study by Kawakami and colleagues found this approach to be an effective means of reducing automatic prejudice, with the effect holding for 24 hours post-training. [145] Subsequent research, however, called into question the effectiveness of this technique, with Gawronski et al. (2008) finding that negation training was ineffective and could possibly even increase automatic prejudices. [146] Seeking to clarify these contradictory findings, Johnson, Kopp, and Petty conducted two studies that examined both the meaningfulness of the negation (i.e., a simple "No" versus a more meaningful "That's wrong!") and whether participants' motivation affected bias mitigation. Using samples of undergraduate students, Johnson et al. found that meaningful negation was more effective at changing automatic racial prejudice than the simple negation of "no." [147] In addition to the quality of the negation mattering, this effect was moderated by participants' motivation to control for prejudiced reactions, as measured by Dunton and Fazio's Motivation to Control Prejudiced Reactions (MCPR) scale. [148] As summarized by the researchers, "Taken together, these studies provide the first evidence that negation training can serve as a useful tool to alter individuals' automatic racial prejudice—if the negations are meaningful and one is motivated to avoid being prejudiced." [147]

SCHOLARSHIP RELATED TO CHILDREN

Exemplars

Continuing the inquiry into whether positive exemplars can mitigate implicit biases [14, 149–154], Gonzalez, Steele, and Baron examined

whether positive outgroup exemplars would work as a successful implicit bias intervention with children. [155] Their study involved over 350 White and Asian children from ages five to 12. Participants in the test condition were either given a vignette depicting the positive characteristics and accomplishments of a White character or a Black character, while children in the control condition read facts about flowers. Following the vignettes, the children took a modified race IAT. Gonzalez et al. found that older children (those age seven to 12) who were exposed to a positive outgroup exemplar exhibited lower pro-White biases than those who were exposed to ingroup exemplars or flowers. [155] However, younger children did not show lower implicit bias scores when presented with the same exemplar. Thus, this study contributed to dialogue on the impact that age may have on the malleability of implicit attitudes.

Motivation
As reflected in the Johnson, Kopp, and Petty study discussed earlier in this chapter and other scholarship, prior research has shown how individual motivation can contribute to one's implicit bias proclivities. [147, 148, 156–158] A December 2015 article by van Nunspeet, Elle-mers, and Derks extended this line of inquiry by considering an approach to enhancing individ-uals' motivation. The authors discussed how making people aware of the moral implications of one's own behavior can reduce implicit biases. [159] Across their review, van Nunspeet and colleagues suggested that "moral motivation and related bias reduction may be enhanced by reminding people that their behavior displays their moral intentions and values." [159] They also reflected on how utilizing this form of motivation may be helpful for companies that are trying to mitigate bias, because it does not rely on individual people being willing to learn and implement bias reduction strategies.

Mindfulness
Building on prior work demonstrating mindful-ness as a promising implicit bias intervention [122–124], Lueke and Gibson sought to use mindfulness as a way to reduce racial discrim-ination. [121] Their study randomly assigned a group of White undergraduates to listen to a ten-minute audio recording: either a mindful-ness recording, a control recording, or a control recording that instructed the participant to attend to specific details of the recording. Fol-lowing the listening exercise, the participants played a trust game, which involved a computer game with a mock partner who was either White, Black, or of Arab descent. Participants decided how much money to entrust their partner in hopes they would return it for a gain [for more on the trust game, see 160]. Results indicated that, in general, participants gave more money to White partners than Black or Arab partners. However, those who listened to the mindfulness recording exhibited significantly less bias in this exercise than the individuals in the other two conditions. [121] These findings demonstrated that even brief mindfulness interventions can create real-world differences in the operation of implicit discrimination.

Duration of Implicit Association Changes
While extensive research has examined inter-ventions to change implicit associations, very little is known about whether short-term malle-ability ultimately yields a long-term persistence of these changes. As a follow-up to an extensive 2014 article that experimentally compared 17 interventions that sought to reduce implicit racial preferences [150], Lai et al. conducted two large experiments that focused on the durability of implicit racial bias reductions from the nine interventions that were successful in the 2014 research. Both experiments featured a delay of several hours to several days in between the in-tervention and follow-up assessment of implicit biases. Across the two studies and more than 6,300 participants, results indicated that while all nine of the interventions reduced implicit

Parallel Student Experiences:

Educators can use the following scenarios as a tool when facilitating discussions about the real-world effects of implicit bias and how educators can be proactive in reducing susceptibility to bias.

BY LENA TENNEY

SCENARIO PART I: STUDENT EXPERIENCE IN A WELL-INTENDED SCHOOL

Maria is a junior at Middlebury High School. Her family moved into the school district at the beginning of the academic year. Her family is one of few Latinx families in town, all of which moved to Middlebury in the past few years. Maria is frequently late to or absent from first period so her teacher, Mr. Jacobs, is worried about her. She misses important material when she is absent. When she walks in 15 minutes late, it causes a disruption for the entire class since the lesson has to be paused and other students become distracted. Mr. Jacobs asks Maria why she is so often late or absent and she says that she just cannot seem to wake up on time because she is always tired. Mr. Jacobs believes in fairness and treating students equally, so he takes this excuse—which he has heard many times in his career—at face value and tells Maria that all high school students are tired but that the other students still manage to make it to class on time. He encourages her to stop staying up so late at night so that she can come to school well rested and invites her to talk to him any time about how she can become more motivated in school. He thinks she is a bright student with a promising future, so he is glad that he was able to talk to her about how to learn more in class by reducing her absences.

Little does Mr. Jacobs know that Maria is exhausted because she works two part-time jobs in order to save money for college. She knows that she is not eligible for most scholarships and financial aid because she is undocumented, so she has to make sure she saves money to follow her dream of attending a university. Maria is disheartened by the conversation. She feels that Mr. Jacobs—like many other teachers she has had before—does not understand what it is like to work two jobs on top of doing homework. She feels that Mr. Jacobs would not take her seriously even if he knew she was working two jobs and she does not dare explain further for fear of anyone finding out that she is an undocumented person.

Maria tries hard to get to school on time after the conversation with Mr. Jacobs but eventually she has missed enough school that the counselor's office sends a letter to her parents warning about the possible consequences of truancy. Usually the counselor's office tries to call parents before sending these types of letters, but no one speaks Spanish well enough to feel comfortable calling Maria's parents. The staff does not want to embarrass Maria's family by trying to have an awkward one-sided conversation and they figure that Maria can translate the letter for her parents.

Maria starts to feel unwelcome at school. When she is short with a fellow student one morning as a result, Mr. Jacobs verbally reprimands her to "stop being so dramatic and so loud." Mr. Jacobs wants Maria to know that it is not appropriate to be rude to peers when you are frustrated. After all, that kind of behavior is not only disruptive to the class but will not lead to success in the "real world." Mr. Jacobs does not realize, however, that since he has had very little in-person interaction with Latinas he has an implicit association connecting Latina women and stereotypes often portrayed by media (such as emotionality and loudness). That implicit association influenced his perception of Maria's behavior and his word choice. Because of Mr. Jacobs' phrasing, Maria feels stereotyped and walks out of the class in frustration.

Maria becomes increasingly frustrated with Mr. Jacobs and the school. When Maria expresses this frustration to the few other Latinx students at Middlebury, they all say that they feel similarly. One student even says that another Latinx student was suspended twice for disrupting classes by being too loud and acting defiant toward a teacher. The student also says that a White student who is always loud in the exact same class has only been sent to the office to calm down and asked to write an apology letter to the teacher for being rude. Maria had not heard about this situation before but it seemed like proof that the teachers at Middlebury treat her and the other Latinx students differently than the White students.

SCENARIO PART II: STUDENT EXPERIENCE IN A BIAS-CONSCIOUS SCHOOL

Maria is a junior at Middlebury High School. Her family moved into the school district at the beginning of the academic year. Her family is one of few Latinx families in town, all of which moved to Middlebury in the past few years. Maria is frequently late to or absent from first period so her teacher, Mr. Jacobs, is worried about her. She misses important material when she is absent. When she walks in 15 minutes late, it causes a disruption for the entire class since the lesson has to be paused and other students become distracted. Mr. Jacobs asks Maria why she is so often late or absent and she says that she just cannot seem to wake up on time because she is always tired.

Mr. Jacobs has heard this excuse many times in his career, as it is a common experience for teenagers. However, he knows that incomplete or ambiguous information can lead to making decisions based on implicit biases so he decides to ask some clarifying questions. He tells Maria that he is sorry to hear that she is not getting enough sleep and asks why that is the case. She informs him that she is working two jobs to save up money for college. Mr. Jacobs thinks Maria is a bright student with a promising future, so he tells her so and encourages her decision to pursue higher education. Mr. Jacobs then asks if there is anything he can do to help (even though he knows he cannot change the overall circumstances of her life). Maria tells Mr. Jacobs that she appreciates his understanding and encouragement. She feels affirmed that her teacher took the time to listen to her. Mr. Jacobs then asks Maria if he can give her a responsibility in the class as the class greeter. She would just need to greet students at the door in the morning and sometimes hand out class materials. Maria is surprised by his question but agrees because she is glad he trusts her with a responsibility.

Maria tries hard to get to school on time after the conversation with Mr. Jacobs, especially with her new responsibility as class greeter, but eventually she has missed enough school that the counselor's office sends a letter to her parents warning about the possible consequences of truancy. The counselor's office tries to call parents before sending these types of letters. Although no one speaks Spanish well enough to feel comfortable calling Maria's parents, they decide to do so anyway because it is worth any potential confusion or awkwardness in order to treat all students equitably. During the call—although more cumbersome than most calls—the counselor is able to connect with Maria's parents and better understand Maria's situation. The counselor asks if it would be beneficial to schedule an elective class for Maria's first period during the next semester so that she is not missing content for a core class when she is absent/tardy. Even though Maria's personal circumstances have not changed, she hopes that she will be able to learn more and miss less essential material the following semester due to the counselor's understanding and creative strategizing.

One morning, Maria is short with a fellow student and Mr. Jacobs' first instinct is to reprimand her verbally for being dramatic and loud. Mr. Jacobs wants Maria to know that it is not appropriate to be rude to peers when you are frustrated. After all, that kind of behavior is not only disruptive to the class but will not lead to success in the "real world." Mr. Jacobs realizes, however, that since he has had very little in-person interaction with Latinas he has an implicit association connecting Latina women and stereotypes often portrayed by media (such as emotionality and loudness). Mr. Jacobs realizes that this implicit association may influence his perception of Maria's behavior and he is intentional about his word choice as a result. Mr. Jacobs decides to pause for a moment before responding to Maria by saying, "I understand that you might feel frustrated right now. Can you help me understand why that might be the case, if so, and how we can resolve it and move forward with class?" Maria is glad that Mr. Jacobs was patient and asked why she was short with another student instead of making any assumptions or invoking stereotypes about Latinas as some other teachers had in the past. She tells him that she overslept and missed breakfast as a result, so Mr. Jacobs asks if she would like a cereal bar. Mr. Jacobs keeps snacks in a desk drawer because the school knows some students come to school hungry so they give all teachers some cereal bars each month in case students need food.

Maria begins to appreciate Mr. Jacobs and the school. She feels that they are valuing her as a person with their supportive actions. When Maria mentions her conversations with Mr. Jacobs and the counselor to the few other Latinx students at Middlebury, they all say that they feel similarly. One student says that another Latinx student and a White student had both disrupted a class by being too loud and acting defiant toward a teacher. Instead of punishing them, however, the teacher decided to ask both students to take some quiet time in the counselor's office to calm down. The students apologized to the teacher later after realizing that they had disrupted the class. Maria had not heard about this situation before but it seemed like proof that the teachers at Middlebury treat students fairly. She is pleasantly surprised to hear this story because at other schools she had attended in the past Latinx students often felt that they were perceived as troublemakers and treated differently than their White peers.

preferences immediately following the intervention, these effects failed to persist over a delay. The authors offered several possible explanations for their findings, but ultimately reflected that "these findings provide new insight into the durability of implicit bias change, establishing a new frontier for understanding the conditions under which shifts in implicit preferences reflect short-term malleability or longer-term change." [161]

Other Scholarship
In a largely theoretical piece about implicit bias and Whiteness, Cole proposed several research-supported strategies that may help well-meaning White people to develop an anti-racist White identity and to practice identifying instances of implicit bias. [162] These strategies are ultimately intended to combat what the author terms "White racial reasoning," which is a process through which "Whites think through their racial identity, usually without conscious intention or awareness." [162] It hinges upon the dual identity goals of: 1) self-enhancement, and 2) the avoidance of appearing to be prejudiced. Cole summarized research related to how Whites pursue these two identity goals to inform the following proposed principles of predicting when and how even well-meaning Whites will rely upon White racial reasoning:

(1) Whites' goals of self-enhancement and egalitarian appearance are likely to be activated and pursued when racial issues are discussed or in the presence of non-White others.

(2) If possible, Whites will seek to pursue these goals concurrently. That is, they will try to maintain a positive sense of self while simultaneously avoiding the appearance of prejudice. (a.) Whites motivated to maintain a positive sense of self will attempt to legitimate their social position, either through promoting a preferred sense of self (e.g., hard workers who have earned what we have), or by deflecting messages that threaten a preferred sense of self (e.g., rejecting social and political explanations that explain White success as a function of White supremacy). (b.) If self-enhancement

cannot be achieved—if the ego threat is too great to allow a self-enhancement strategy – then, Whites will activate and apply negative racial stereotypes (i.e., learned, implicit biases) in order to denigrate the threatening group(s) and legitimate White social advantage." [162]

Cole suggested that within this framework, Whites' cognition is driven not solely by "antipathy for non-White people" but rather by White identity goals. [162] Thus, even well-intentioned White individuals who believe in egalitarianism may unconsciously uphold White supremacy. The ways in which White racial identity informs motivated cognition—and ultimately, the unconscious preservation of White supremacy—led the author to propose the aforementioned strategies for the creation of anti-racist White identities and the ability to recognize occurrences of implicit bias.

According to Cole, the development of an anti-racist White identity might be achieved through educating White people about the history of antiracist White activists in affinity groups (essentially, White spaces) while also "provid[ing] the space for Whites to articulate their views about what an oppositional, antiracist White identity would mean and the practices associated with living into that identity." [162] Such spaces could lead to the creation of and commitment to anti-racist identity goals that could—after practice by the individual—transform into intrinsic identity goals that direct their implicit cognition. The practice of identifying instances of implicit biases might also be achieved through educating White people in affinity groups. Discussion of stereotypes, how they are activated, and their role in the use of coded racial language may help Whites better identify when implicit biases are invoked in media and political content. Cole also suggested calling out the implicit racial bias that is embedded in such messaging. Explicitly exposing implicit racism as racism is likely to motivate Whites to reject the messaging since it goes against Whites' desire to appear non-biased. Furthermore, Cole indicated that social media platforms are a promising venue for recognizing and calling out implicit bias. ∎

Being an Active Bystander

BY LENA TENNEY

It can be difficult to know what to say when a family member, friend, colleague, or acquaintance makes problematic comments. However, we will only be able to dismantle racism in its overt forms if we are brave enough to challenge racism in even its most common forms. The Kirwan Institute invites you to utilize the strategies highlighted in this resource in order to empower yourself to speak out in response to biased comments. In the words of Audre Lorde, *"When we speak we are afraid our words will not be heard or welcomed. But when we are silent, we are still afraid. So it is better to speak."*

STEPS TO BEING AN ACTIVE BYSTANDER
• Identify the emergence of bias.
• Decide to address the situation.
• Take action.
• Continue the conversation.

STRATEGIES FOR SPEAKING OUT
• Use Humor
  • *"What are you?" "Human! How about you?"*
  • *"Your English is so good!" "I hope so. it's the language I've been speaking my entire life!"*
• Be literal/refuse to rely on the assumption being made.
  • *"That's so gay!" "I didn't know that ____ could have a sexual orientation. How does that work?"*
  • *"That stereotype gets me every time! I don't understand why so many people think that stereotyping an entire group makes any sense."*
  • *"I don't get the joke. Can you explain it to me?"* If they say that *"it was just a joke"* or that *"you can't take a joke"* you can say, *"I know that you think it's just a joke. But I don't find it funny."*
• Ask questions that invite discussion.
  • *"What do you mean when you say that?"*
  • *"Do you know what that phrase actually means and where it came from?"* Most people have no idea that it actually has an offensive meaning.
• State that you are uncomfortable.
  • *"That phrase makes me uncomfortable. Could you please not use it around me?"*
  • *"Assumptions about an entire group of people make me uncomfortable. I don't think that we can take that assumption for granted or make our decisions based off of it."*
• Use direct communication.
  • *Speak honestly and from the heart, using "I" statements to communicate how you are feeling, why, and what could be done.*
  • *"I know that you aren't intending to stereotype anyone, but as your friend I wanted to let you know that what you said could easily be interpreted that way. Since I know you're a good person who cares about others, I would hate for you to accidentally say it again without realizing how it can come across."*

For additional information or questions, please contact Lena Tenney, MPA, MEd. Coordinator of Public Engagement at tenney.39@osu.edu or (614) 292-3891.

Full report and related videos at **http://go.osu.edu/B86X**

"The point is that some of these
 new measures are of interest simply
 because they allow one to firmly
 get away from verbal self-report
 measures and as such they expand
 the horizon of what can be learned
 about attitudes. In so doing, they offer
 a window into a mental world to which
 the conscious mind is not privy."

MAHZARIN R. BANAJI, 2001 [163]

7 Assessments / Measurements

Scholars have identified several strategies for assessing implicit biases. While this chapter is not an exhaustive discussion, we highlight the latest findings as they pertain to a few specific measurement techniques.

Responses to the Implicit Association Test (IAT)

A few studies have analyzed individuals' responses to IAT results. [see, e.g., 33, 164] Adding to this line of inquiry, in an early 2017 article, Howell and Ratliff examined whether the belief that one is better-than-average would predict increased defensiveness when receiving IAT feedback. [165] The first study examined data of participants who took the weight IAT, recorded their explicit weight-related preferences, and indicated the degree to which they thought others held pro-thin biases. Participants' explicit pro-thin bias was subtracted from their perceptions of others' pro-thin biases as the measure of the degree to which they held better-than-average beliefs. Following feedback on their IAT results, participants' defensiveness was measured by indicating how reflective of their implicit attitudes they perceived the scores to be. The results showed that participants generally held the belief that they were better-than-average, and

they were somewhat defensive to IAT results overall. However, those who held a high level of better-than-average beliefs were more likely to be defensive for holding a pro-thin bias than those who held low better-than-average beliefs. [165] The second study sought to replicate their earlier finding, but it expanded the analysis to include nine randomly assigned IATs, including the race-weapons IAT, the gender-career IAT, and the abled-disabled IAT. Similar to study one, par-

> "...those who held a high level of better-than-average beliefs were more likely to be defensive for holding a pro-thin bias than those who held low better-than-average beliefs"

ticipants generally demonstrated better-than-average beliefs. Also evidenced in this study was an increased defensive response from participants with better-than-average beliefs, which is crucial when understanding how to combat implicit biases held by people who do not regard themselves as harboring implicit biases.

Conceptually related to Howell and Ratliff's work is the research of Nadan and Stark that is focused on pedagogical perspectives of social work educators by conducting a qualitative study on students' ungraded reflections after taking the IAT. [166] By performing a thematic analysis on student reflection papers, the researchers found that using the IAT as an educational tool created an experience of discomfort for the students. This discomfort manifested in students identifying ways to cope with the anxiety of receiving feedback that they were biased, which typically involved rejecting the IAT's reliability or validity. Students also noted wanting to look into their personal background to explain the results or even wanting to "outsmart" the test so they would receive feedback that they were not biased. [166] These responses to IAT results echo portions of Clark and Zygmunt's typology, notably discomfort, inclinations to disregard the validity of the test, and acceptance that individuals' beliefs and experiences may contribute to their harboring implicit biases. [164]

Perhaps the most important insight for educators from Howell and Ratliff was the tendency for students to believe their biases reflected a static personality trait rather than social influence, despite this being a core element of how the class was framed. In a world where social oppression is increasingly exacerbated, increased recognition and discomfort regarding implicit biases will become inevitable. Educators, therefore, must strike a delicate balance between creating a safe environment for engaging with this discomfort while encouraging students to leave their comfort zones and grapple with these results.

Affect Misattribution Procedure (AMP)

Through two studies, Cooley and Payne offered an improved method for measuring implicit attitudes toward an entire social group. [167] The studies examined whether using images of groups rather than of individuals would improve the validity and reliability of implicit attitude assessments. In the first study, participants were asked to rate how representative images of Black individuals, Black groups, White individuals, and White groups were of their overall social category. Although each category was rated as representative of the overall social category, groups rather than individuals were rated as most representative. In the second study, participants took an Affect Misattribution Procedure (AMP) that used images of groups or individuals to assess their implicit racial attitudes. As such, Cooley and Payne were interested in whether using individual or group stimuli on a racial AMP would be a better predictor of participants' explicit attitudes. Findings indicated that participants' AMP scores using both individual and group stimuli were significantly related to their explicit biases; however, the scores on group AMPs predicted explicit bias above and beyond the individual AMPs. [167] Moreover, in terms of the test-retest reliability of these measures, the group AMP demonstrated stronger test-retest reliability than the individual AMP. Finally, participants returned another time to determine whether the individual or group AMP would better predict racially biased behavior. The participants rated a series of mock application materials that measured racial bias through differences in participants' rating of applicants based on whether the application had a traditionally Black or White name. Similar to prior results, both AMPs predicted racial bias on the hiring exercise, but the group AMP was a better predictor than the individual AMP.

Taken together, Cooley and Payne's studies illustrated that using group stimuli on implicit attitude assessments can lead to greater construct validity and reliability, and may serve as a better predictor of behavior than assessments using individuals' images. Thus, this study provides new insights on how we assess implicit attitudes toward broad social categories.

Faking

While one of the recognized benefits of indirect (i.e., implicit) measures of attitudes is the notion that they are not as easily manipulated by social desirability concerns as are direct measures, implicit measures nevertheless are not immune to these concerns. Indeed, previous work has examined whether participants can successfully generate invalid results by "faking out" tests like the Implicit Association Test (IAT) [150, 168–172] or Affect Misattribution Procedure (AMP) [173]. Building on this foundation, a 2016 article by Hughes and colleagues used four experiments to study whether the Implicit Relational Assessment Procedure (IRAP) is also susceptible to faking. A 2007 article by McKenna et al. suggested that the IRAP is not easily amenable to manipulation in the absence of giving participants a concrete strategy for doing so [174]; however, Hughes and colleagues found that giving participants varying degrees of instruction on how to fake out the IRAP led to participants being able to eliminate or even reverse the direction of their effects. [175] As such, the authors concluded that "IRAP performance can be strategically manipulated." [175] ■

"Neuroscience does not provide an excuse to continue to have and act on our biases. Instead, it reveals those biases and removes our ability to deny the tendencies of our unconscious mind."

KIMBERLY PAPILLON, 2012 [176]

8 Neuroscience

Insights from neuroscience continue to augment the foundation of implicit bias scholarship, with themes that carry implications for other disciplines, such as perceptions of pain and others addressed in this chapter.

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Attention and Perception
Working outside the Black-White dichotomy that pervades much of the implicit bias research, Guillermo and Correll considered attentional biases (i.e., whether a face captures and maintains someone's attention) toward Latino faces in two studies using White participants. [177] In the first study, participants viewed a selection of White and Latino faces. On "valid" trials, a dot appeared on the same side of the screen as the face. On the "invalid" trials, the dot appeared on the opposite side of the screen as the face; thus, reaction times are generally quicker for valid trials compared to invalid trials. [177] In this study, an attentional bias toward Latinos could be measured by shorter reaction times on valid trials and longer reaction times on invalid trials for Latino versus White faces. The findings showed that Latino faces held participants'

attention more than White faces; however, there were no differences in how faces captured attention. The second study replicated all aspects of the first while incorporating Black faces via the inclusion of a separate task. The findings in the Latino-White task replicated the first study. On the Latino-White-Black task, both Latino and Black faces held participants' attention longer than White faces, but there was no difference between the two. These results suggest an attentional bias to racial outgroup members in general, rather than toward a specific racial identity.

"the recognition of a social category then goes on to elicit other higher level cognitive processes such as stereotypes and attitudes."

Synthesizing a wealth of new information in the fields of neuroscience, social cognition, and vision, Cassidy and Krendl reviewed the literature on humans' implicit perception of social categories. [178] Of greatest significance is the evidence that social perception is an interactive

process. This conclusion stands in juxtaposition to the notion that visual cues (e.g., skin tone or facial features) activate the recognition of a social category (e.g., racial identity) in the perceiver's mind. From this perspective, the recognition of a social category then goes on to elicit other higher level cognitive processes such as stereotypes and attitudes.

Instead, the authors cited research that demonstrated the opposite—that social cues or primes can bias our initial perceptions. Moreover, they highlighted the complexity of how social categories are activated in our minds. For example, activation of one social category may simultaneously activate other social categories (e.g., race and gender) if both identities elicit similar stereotypes. Specifically, "Black" and "male" categories may be simultaneously activated, as well as "Asian" and "female." The article also implicated three cognitive structures for maintaining this complex relationship: the fusiform gyrus, the orbitofrontal cortex, and the anterior temporal lobe. Each is involved with the integration of information related to social categories during facial perception.

Perceptions of Pain
Berlingeri et al. evaluated two neurological phenomena related to pain perceptions of outgroup members. [179] The first was a neurological response associated with less empathy for racial outgroup members. This response, referred to as the differential empathetic activation for race (i.e., the "DEAR" effect), correlates with one's implicit biases. [179] The second occurs when participants explicitly rate the level of pain experienced by outgroup members. Respondents appear to be able to control their ratings in a politically correct fashion and attribute equal pain ratings to Black and White actors. The current study analyzed the neurological underpinnings of these seemingly incongruent effects using 25 White participants who took part in a functional magnetic resonance imaging (fMRI) scan. [For other examples of fMRI use in implicit bias research, see 180, 181–185, 186.] During the scan, participants viewed videos of a target actor being touched by a White hand with either a rubber eraser or a needle. These images were counterbalanced by race and gender. To measure what brain regions were active, participants' blood oxygenation level dependent (BOLD) signals were measured when they viewed the painful stimuli as well as when they rated the pain severity. The participants also took an IAT to measure their implicit racial biases. In addition to IAT results that indicated a general pro-White implicit bias, participants took longer to judge the pain of Black actors. However, there were no differences in the explicit ratings of the pain perception of White and Black actors. During the stimulus phase, the DEAR response registered in the left supramarginal gyrus was stronger for White than Black actors; during the response phase, the DEAR effect in the dorsal prefrontal cortex (DPFC) was stronger for Black actors. The racial differences in the location of DEAR responses suggested top-down control processes were involved when making the politically correct answers during the pain rating, while participants' automatic tendency was to perceive less pain for the Black actor than the White actor. [179]

Other Scholarship

Building on their study showing noradrenaline (NA) activity in the fusiform gyrus related to implicit bias [185] and their psychopharmacological study that reduced implicit but not explicit bias [187], Terbeck and colleagues continued their work on the role of noradrenaline (NA) in social cognition. [188] As part of this discussion, the researchers reviewed how this chemical, which is related to both cognitive and physiological stress responses, affects implicit ingroup bias. Their review explored how NA is connected to basic emotions such as anger, fear, and happiness rather than more complex social emotions such as guilt or empathy. Thus, the authors posited that NA activity can help us understand how basic emotions influence complex social judgments and may directly influence implicit social attitudes. [188]

Freeman and Johnson studied whether implicit bias or other neural mechanisms predicted racial disparities in ratings of perceived trust toward others' faces. [189] To test this question, thirty White adults underwent an fMRI task during which they sorted a series of Black and White faces by a non-racial category—age. For each photo, they indicated whether they thought the individual was above or below the age of 24. Among other measures of explicit bias, Implicit Association Test responses were recorded before the fMRI. After the fMRI task, participants rated each image on their level of trustworthiness on a 1–7 scale; these rating were used as a measure of trust disparity between Black and White faces. Results from this task demonstrated that individuals with higher levels of implicit bias exhibited higher degrees of racial trust disparity. [189] Additionally, other neural processes related to differentiating faces of outgroup members affected participants' trustworthiness ratings independent of their levels of implicit bias. For example, more orbitofrontal cortex (OFC) activation and fusiform gyrus-OFC connectivity when perceiving Black compared to White faces predicted less trust disparity. The role of these

two locations demonstrated the importance of both race perception and cognitive control processes on perceived trust.

Finally, continuing scholarship regarding the Implicit Association Test attempted to understand the neuroscience aspects of why people are more easily able to respond to congruent IAT trials than incongruent ones (e.g., pairing "flower" with "pleasant" more easily compared to "insect" and "pleasant," to borrow an example from the 1998 debut article of the IAT [190]). To understand these differences, Schiller and colleagues examined whether longer response times indicated more mental processes were taking place or whether it reveals that the same processes were taking longer. [191] By using an EEG (electroencephalogram) while participants took an IAT, they recorded event related potentials (ERPs) and analyzed the data according to where in the brain activity occurred and when. The findings revealed that participants engaged in the same seven processes during both congruent and incongruent trials. Moreover, they found two specific processes that took longer on incongruent trials; these processes were related to the perceptual processing of the stimuli and cognitive control of their motor responses. ∎

"The bad news from the science is that even well-intentioned individuals have biases that can impact their perceptions and behavior—producing discriminatory behavior. The good news from the science is that individuals, once educated on the science of implicit bias, can impact those biases."

DR. LORIE A. FRIDELL, 2017 [192]

9 General Contributions

This final chapter captures significant scholarly contributions that extend beyond the domains already addressed in this publication. While expansive, we reiterate our objective to focus on notable works rather than an exhaustive listing.

SCHOLARSHIP RELATED TO CHILDREN

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Children

While previous research has recognized the existence of implicit biases in children [35, 38, 39, 193, 194], a new article examined whether adults' implicit racial bias toward children differed from this bias toward adults. Conducted in the UK, Wolf et al. used White European participants, thus creating a White European ingroup to contrast with a South Asian outgroup. Across three studies that considered both age and ingroup/outgroup status, the researchers found that White European participants consistently displayed an implicit preference for their own ingroup, even when the targets were infants and toddlers. [44] Other factors such as participants' spontaneous liking of children or perceived attractiveness of the children failed to account for this finding. As a whole, this research found that "spontaneous racial bias is more attributable to robust in-group favoritism than to out-group derogation" and it "challenge[d] the notion that prejudice against children is lower than prejudice against adults." [44]

In another article considering differences in adult-child dynamics, Todd et al. continued a line of inquiry related to implicit stereotypes of Black men as violent and criminal to consider whether these stereotypes apply to young Black children. Across four experiments that used both words and images to study race-based threat associations, the authors found that youth does not attenuate these associations; that is, Black faces—regardless of age—facilitated the detection of threatening objects and terms. [43] Further analyses determined that these biases were driven by automatic cognitive processes. Todd and colleagues concluded that

their evidence suggested "that the perceived threat commonly associated with Black men may generalize even to young Black boys." [43]

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Interested in how the racial attitudes of preschoolers differed from those of adults, Qian and colleagues employed two studies to examine the implicit and explicit attitudes of preschoolers within racially homogeneous societies in Asian and Africa. [42] The first study measured these attitudes for over 200 Chinese preschoolers (age 3 to 5) and adults; these measurements included stimuli of same-race (Asian) and other-race (Black and White) faces. To ensure that the way the researchers measured implicit attitudes was developmentally appropriate for preschoolers, they developed a modified IAT, the Implicit Racial Bias Test (IRBT). The IRBT differed from the IAT in that it replaced text stimuli with images, and it used smiling and frowning faces for response buttons.

"...referencing the historical importance and framing the election of President Obama as a racial milestone increases implicit anti-Black bias among Whites"

The results showed that preschoolers exhibited implicit own-race biases as early as the age of three. [42] Even though all Chinese participants implicitly preferred Chinese faces to other race faces, both children and adults showed more positive implicit attitudes toward White faces than Black faces, though this difference was more pronounced for adults. Moreover, children, but not adults, expressed explicit pro-Chinese biases. A second study included the same stimuli and procedure as the first but studied Black preschoolers and adults from Cameroon. The results showed that 3 to 5 year olds had an implicit preference for own-race faces; however, adults preferred other race faces and showed an implicit bias toward both Chinese and White faces compared to Black faces. Again, children but not adults expressed explicit pro-Black biases.

In tandem, both studies provide evidence that social status influences people's implicit and explicit biases over time.

While previous work has considered the malleability of implicit biases in adults [see, e.g., 1, 13, 14, 152, 195, 196], less scholarship has considered how implicit association changes may operate in youth. A 2016 study by Gonzalez, Dunlop, and Barron used a sample of children ages 5–12 years old to study age-related differences in the formation of and changes to novel implicit associations. Participants were presented a story describing a novel (i.e., non-existent) group and then a second story in which the novel group was associated with a behavior that contrasted the initial story. Participants completed the Child Implicit Association Test (IAT) after hearing each story. Results indicated that the ability to form and change implicit associations does not seem to differ across childhood, "suggesting that the mechanism(s) governing implicit associative learning may be fully intact by age 5." [45] The researchers reflected that this reinforces the notion that first impressions—regardless of the age of first exposure—are particularly influential. In terms of association change, Gonzalez et al. found that novel implicit associations can be reversed and are "particularly sensitive to additional reinforcement." [45]

The Obama Presidency

Skinner and Cheadle used priming related to the election of President Obama as a way to further understand implicit racial bias among White Americans. With more than 200 participants, the researchers considered how group threat theory (i.e., the idea that "members of the societally dominant group will respond with prejudice when they feel that members of a subordinate group are threatening their position") may lead to an increase in implicit racial bias as a result of increased outgroup power or size. [197] The experiment had three conditions: 1) priming power threat by reading a *New York Times* article on the historic significance of Obama's election; 2) priming majority threat by reading a *New York Times* article on projected demographic shifts in the U.S. toward "minority-majority;" 3) a control. After their experience in a condition, participants took assessments

to determine their internal and external motivations to respond without prejudice, as well as the Black-White IAT. Results showed that Whites' implicit racial bias increased when primed with the piece on Obama's racial milestone vs. the control, and participants had greater implicit bias against Blacks in the demographic shift prime condition than in the control. [197] Notably, motivation to avoid prejudice also mattered, as "only those with lower internal motivation to respond without prejudice showed an increase in implicit bias" in the first condition. In sum, the implications of this work "show that referencing the historical importance and framing the election of President Obama as a racial milestone increases implicit anti-Black bias among Whites, especially those who are lower in internal motivation to respond without prejudice." [197]

In light of contrasting research on whether President Obama had a positive impact on implicit attitudes early in his presidency [16, 149, 198–200], Columb and Plant were interested in revisiting this notion of the "Obama Effect" near the end of Obama's tenure in office. Across two studies, the researchers found that following exposure to negative Black exemplars (e.g., O.J. Simpson and Michael Vick), exposure to President Obama led to a decrease in implicit anti-Black evaluative bias and also decreased implicit racial stereotyping, both relative to a control. [154] These effects were not moderated by explicit views of Obama, political affiliation, or other related variables. A second experiment considered a different exemplar, Kobe Bryant, who was pre-assessed to be positive like Obama but more stereotypic of Black people than Obama. Findings suggested that despite differences in perceived stereotypicality, both men had a similar effect on reducing both implicit anti-Black evaluative bias and racial stereotyping relative to a control condition. [154] Taken together, the authors reflected that the valence of exemplar may be more significant than the individual's counter-stereotypicality in changing implicit attitudes and stereotyping.

In contrast to Columb and Plant's findings, work by Schmidt and Axt found no substantive evidence of implicit attitude change (toward Blacks in general, or toward Obama himself) over the first seven years of Obama's presidency after accounting for sample demographic shifts.

[201] The researchers examined cross-sectional data from more than 2.2 million individuals who completed the Race or Presidents IATs on Project Implicit.® Noting how Obama's presidency can be perceived as a naturalistic study of sustained exposure to a counterstereotypical exemplar, his effect on implicit cognition seemed minimal. [201] The authors stated that these findings may reflect the notion that implicit anti-Black attitudes had already been changing prior to his election; thus, "Obama's election may be remembered less as a catalyst and more as a byproduct of changes in attitudes toward Black people." [201]

Given the aforementioned divergent research on whether an "Obama effect" existed, March and colleagues considered how the valence of Obama's portrayal may contribute to these mixed findings. Using content from two popular news websites (CNN.com and FoxNews. com) with a focus on the contextual elements surrounding Obama's image, the researchers examined 1) whether FoxNews.com portrayed Obama more negatively than CNN.com, and if so, 2) what effect this may have on automatically activated attitudes. The first study revealed that undergraduate participants found the news websites' images of Obama varied systematically, as images from FoxNews.com – regardless of whether text accompanied the image—yielded more negative portrayal ratings than CNN.com. [202] A second study used a Single Category IAT (SC-IAT) to assess undergraduate participants' automatic attitudes toward Obama, as well as other measures. Results indicated that participants with weaker attitudes developed more negative associations with Obama when repeatedly exposed to his portrayal in a negative manner. [202] Broadly speaking, this work aligns with Columb and Plant (2016) in concluding that while attitude change may be the result of counterstereotypical exemplars, it appeared that "exemplar valence may be the primary cause of the effect." [202]

Implicit Attitude Formation
Studying the processes behind how individuals form implicit attitudes, Hu, Gawronski, and Balas evaluated two competing theories on the process of evaluative conditioning. [203] The

Foretelling the Future

A Critical Perspective on the Use of Predictive Analytics in Child Welfare

BY KELLY CAPATOSTO

While there has been a lot of enthusiasm surrounding predictive analytics and their possible benefit in the area of child welfare, others have begun to voice concerns regarding their use. As discussed in this white paper, there are reasons to be wary of the widespread use of predictive analytics. The risk of perpetuating cognitive and structural biases is among them. This paper does not to condemn the use of predictive analytics. However, it does hope to promote a critical assessment of these tools and the emergence of other Big Data applications.

THEORETICAL FRAMEWORK

In this report, the Kirwan Institute applies a framework for analyzing racial inequity that considers both 1) cognitive and 2) structural barriers. In tandem, the operation of these barriers explains how inequity can persist in various institutions.

Cognitive Barriers: The role of individual-level thoughts and actions in maintaining structures of inequity. Rather than focusing on explicit, intentional discrimination, the Kirwan Institute highlights the importance of implicit bias and other unconscious psychological processes.

Structural Barriers: The influence of history on policies, practices, and values that perpetuate inequity.

APPLYING THESE BARRIERS TO PREDICTIVE ANALYTICS USE

Models of predictive analytics proceed in three stages. First, data goes into the model. Second, the model, with algorithms and/or statistical analyses, creates an output. Finally, individuals apply the model's outputs to decision-making at the field level. The following analysis critically examines concerns with both the inputs & outputs regarding cognitive and structural factors that could be at play.

	Cognitive	Structural
Inputs	*Humans Encode Biases into Machines*	*Previous Marginalization as a Predictor for Future Risk*
Outputs	*Overconfidence in the Objectivity of Outputs*	*Perpetuating Existing Structural Disparities*

By examining the interaction between the cognitive and structural barriers within both the inputs and outputs, we uplift four potential pitfalls of predictive analytics: 1) Humans Encode Biases into Machines, 2) Previous Marginalization as a Predictor for Future Risk, 3) Overconfidence in the Objectivity of Outputs, and 4) Perpetuating Existing Structural Disparities, described in more detail below.

HUMANS ENCODE BIASES INTO MACHINES

Human beings encode our values, beliefs, and biases into these analytic tools by determining what data is used and for what purpose. The data that institutions choose to use reveal what variables and reporting mechanism are valued most. As indicated by the implicit bias research literature, these unintentional biases can have huge ramifications for our ability to safeguard opportunities for individuals of various genders, races, and ability statuses. To illustrate, one study demonstrated that resumes with White sounding names were nearly 50% more likely to get a call back than resumes with Black sounding names, despite controlling for all other factors, including work experience.

PREVIOUS MARGINALIZATION AS A PREDICTOR FOR FUTURE RISK

Because of past discrimination and historical inequities, subtle biases can emerge when seemingly "race neutral" data acts as a proxy for social categories. For example, data related to neighborhood characteristics, such as zip code are profoundly connected to historic practices of racial exclusion and discrimination. Thus, data that is ostensibly used to rate risk to child well-being can serve as a proxy for race or other past oppression, thereby over-representing those who have suffered from past marginalization as more risky. Even more troubling is the omission of information for youth who do not enter the child welfare system as a counterbalance for these predictions of risk. It is impossible to know how many children who are never maltreated and whom would not properly be assessed as "high-risk" for maltreatment under these factors.

OVERCONFIDENCE IN THE OBJECTIVITY OF OUTPUTS

The allure of predictive analytics is their potential for identifying and correcting for human biases that may arise during important child welfare decisions by lessening reliance on individual judgments. However, algorithms alone are no panacea to subjectivity. Instead, these models can unintentionally encode the same biases reflected in our society. Moreover, it can be very difficult to retroactively identify or correct instances where bias has already occurred. Thus, one of the most serious dangers of predictive analytics is our overconfidence in the objectivity of their outputs.

PERPETUATING EXISTING STRUCTURAL DISPARITIES

One of the potential uses of predictive analytics is the ability to classify individuals and families based on individual risk profiles for maltreatment. To illustrate, one predictive analytic tool utilized data from youth self-reports to determine the variables most related to youth resiliency. Even though the identification of these risk factors is empirically valid, research has yet to show the link between these resiliency scores and treatment outcomes. Thus, this type of scoring may have the potential to impose a punitive system of gatekeeping on less-resilient youth who are denied opportunities more resilient youth are routinely offered. This is just one example of predictive analytics efforts, though research-based, that may not generalize into effective field use. Moreover, if tools such as these do get utilized in the field, their application may actually perpetuate existing structural disparities by restricting necessary services to certain families or neighborhoods.

Full report and related videos at **http://go.osu.edu/B86X**

first is the dual-process account, which is guided by the assumption that distinct processes are involved in implicit and explicit attitudes. In contrast, the propositional perspective posits that individuals form non-automatic propositions related to the nature of a relationship between stimuli that informs both explicit and implicit attitudes. The main difference explored in this article is whether information about the relationship between a Conditioned Stimulus (CS) and an Unconditioned Stimulus (US) affects only explicit attitudes (the dual-process account) or implicit attitudes too (the propositional account). Although results were not entirely consistent across three experiments, the culmination of these findings generally upheld the idea that relationship information can influence implicit attitudes under the correct circumstances, thereby lending greater support to the propositional theory of evaluative conditioning than the dual-process account. [203]

Technological Applications and Innovations
As an innovative application of implicit bias research, scholars are exploring the potential for automated discrimination; that is, where algorithms and other machine learning processes perpetuate bias without being explicitly programmed to do so. Providing a comprehensive overview on the subject, Staab, Stalla-Bourdillon, and Carmichael explored the best possible way to ensure that algorithms do not discriminate by race. [204] The report focused on "black box" algorithms that are ambiguous or difficult to understand. With black box algorithms, the inputs and outputs are observable but the internal processes are unclear. [204] As part of this overview, the report outlined examples of how algorithms can perpetuate the same biases that humans do. The report provided examples of how algorithms that use seemingly neutral proxies for inputs, such as ZIP code, have the potential to discriminate against marginalized groups. Among several suggestions to mitigate the operation of bias in the application of machine learning, the authors offered supporting interdisciplinary collaboration and being conscious of bias in the data mining processes.

Exploring the concern that artificial intelligence (AI) may exhibit the same biases as humans, Caliskan-Islam, Bryson, and Narayanan used an algorithm to analyze how language itself can reveal biases. [205] This AI learns word meanings based on their context with other words; words that frequently appear together in similar contexts often are more closely related. As a practical example of how this works, the researchers stated, "if we find that programmer is closer to man than to woman, it suggests (but is far from conclusive of) a gender stereotype." [205] Based on this operation, the researchers posited that this technique is analogous to the way an IAT measures implicit bias, but instead of using reaction time, it relies on distance between associated words. As such, the study used

"… the report outlined examples of how algorithms can perpetuate the same biases that humans do."

this linguistic AI to replicate seminal studies related to implicit bias, two of which focused on race.

One study replicated foundational implicit bias research that established the IAT as an implicit bias assessment. [190] The language analysis included the same words as the original study, which included names associated with either Black or White individuals (e.g., "Lakisha" vs. "Amanda") and words depicting positive or negative bias (e.g., "love" or "family" vs. "abuse" or "filth," etc.). [205] The second study explored the associations between a similar set of racially coded names and a list of words conveying pleasantness (e.g., "joy") vs. unpleasantness (e.g., "agony") in order to replicate a classic 2004 article by Bertrand and Mullainathan. [206] In both examples, the AIs replicated the same biases revealed by implicit association studies; words associated with Whiteness were more closely associated with positive or pleasant words than words associated with Blackness were. [205] The same was true of the inverse. These results are the first of its kind to demonstrate that a commonly used language analytic tool can exhibit the same biases as humans.

AUTHOR REFLECTION

Kelly Capatosto

SINCE I STARTING WORKING on the State of the Science, this is perhaps the first year that the concept of implicit bias has reached a national audience. With this growing spotlight on implicit bias, we have reached an exciting benchmark in the public's perception of the issue. This new level of awareness creates some interesting opportunities to explore the application of implicit bias in a variety of domains. The intersection of implicit bias, big data, and technology is something I perceive will be critical for the field's future direction. As the wave of automation looms over us in the U.S., it is of paramount importance that we ensure our data and analytics are able to account for and control bias (both implicit and structural).

As part of this future direction, a 2016 article by Caliskan-Islam, Bryson, and Narayanan is one of the most innovative applications of implicit bias research I have seen this year. By demonstrating that a language-based artificial intelligence (AI) tool can internalize biases, this piece turns our current understanding of discrimination on its head.

Ultimately, I feel like the goal of implicit bias research has always been to remove the need to prove intent to demonstrate the severity of racially disparate outcomes in our society. Artificial intelligence tools are unbiased by nature—they are a proverbial blank slate—thus any bias they learn reveals the unconscious biases and associations inherent in how humans learn and interact with each other. Thus, I believe this study is the first of many that will ultimately reshape how our society defines culpability in producing racially disparate outcomes. Finally, I hope to see much of this new work in using technological advancements usher in a new era of bias-prevention efforts.

ARTICLES MENTIONED: Caliskan-Islam, A., Bryson, J. J., & Narayanan, A. (2016). Semantics Derived Automatically from Language Corpora Necessarily Contain Human Biases. arXiv preprint arXiv:1608.07187.

These findings have enormous implications for the field of technology. First, the authors asserted that any AIs that rely on language to learn will inevitability internalize the biases present in our culture. Thus, if bias is inherent our language, even a completely neutral machine will eventually learn enough of our language to have biased associations. As such, scientists in other research domains may be pushed to consider that presence of these types of biases and prejudice in humans as the new "null hypothesis," rather than the exception. [205]

Interracial Dynamics
As part of a series of studies that examined the neurological "disgust" response associated with participant perceptions of interracial couples, Skinner and Hudac examined whether this phenomenon was related to the implicit dehumanization of interracial couples. [207] Moreover, the study sought to determine whether this bias was higher if participants were primed with images eliciting disgust. To test this effect, 100 mostly White participants took a modified IAT with stimuli showing same-race and interracial couples. Prior to the IAT, participants were either primed with neutral images or images eliciting disgust (e.g., a dirty toilet). Findings showed an overall tendency to implicitly dehumanize pictures of interracial couples compared to same-race couples, and this implicit bias was more pronounced if participants were primed to feel disgust. [207]

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Political Activity
Linking their research to the Charlie Hebdo attack, Zerhouni et al. studied whether implicit prejudice at the city-level predicted participation rates in subsequent mass demonstrations. [208] Responding to criticisms that the demonstrations were motivated by implicit anti-Arab attitudes, the researchers utilized public data from the French/Arab IAT from participants

in French territories from 2007–2014. They created a measure of the relative cultural level of implicit prejudice by averaging the IAT scores from French cities with the largest participation in the rallies, which were then compared with the participation rates documented by authorities during the 2015 rally. In their analysis, Zerhouni and colleagues identified a significant negative relationship between city's implicit prejudice level toward Arabs and participation in the Charlie Hebdo rallies. However, this pattern contrasted with the idea that the rally resulted from the public's implicit anti-Arab attitudes. Instead, they found that less implicit prejudice toward Arabs was related to a greater amount of participation in the rallies. Although conclusions of causation cannot be drawn from this study, it does advance the future exploration of using implicit attitudes collected at the city-level to understand social behavior. As such, a city's relative level of implicit bias may provide insight on how inhabitants might react to a particular social phenomenon. ∎

MORE TO EXPLORE

IMPLICIT BIAS AND INCLUSIVE LANGUAGE
Even well intentioned people can possess bias. Though studies have shown explicit expressions of biased beliefs and attitudes have declined significantly

over the past few decades, measures of implicit bias remain persistently high.

On this episode of *Student Affairs Live*, host Tony Doody speaks with Zaneta Rago-Craft, Yoshiko Harden, and Lena Tenney to better understand where, how and when we develop our bias. Other topics explored on this episode include micro-aggressions and inclusive language, strategies for ameliorating bias, and tactical self-presentation.

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WATCH "IMPLICIT BIAS AND INCLUSIVE LANGUAGE" HERE:
• http://go.osu.edu/B9ax
• https://www.youtube.com/watch?v=FEtDWCCUq4k&t=199s

CONCLUSION

Authors' Note on Five Years of the State of the Science

Over the past five years, the Kirwan Institute for the Study of Race and Ethnicity has invested significant time and energy into diligently following the scholarly implicit bias literature as it gained enormous traction in academic circles while simultaneously permeating public discourse to previously unseen degrees.

The warm and enthusiastic reception of the *State of the Science: Implicit Bias Review*—even as early as its inaugural year—has consistently encouraged our team as we hear of the publication fostering meaningful conversations, and most importantly, change across time, geography, and circumstance.

While the Kirwan Institute remains committed to maintaining the pulse of the *State of the Science*, we have begun discussing new approaches for making this product increasingly accessible and more responsive to current events. Our team has dreamed some big dreams for the future possibilities of this work, and we look forward to sharing them with you in 2018.

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