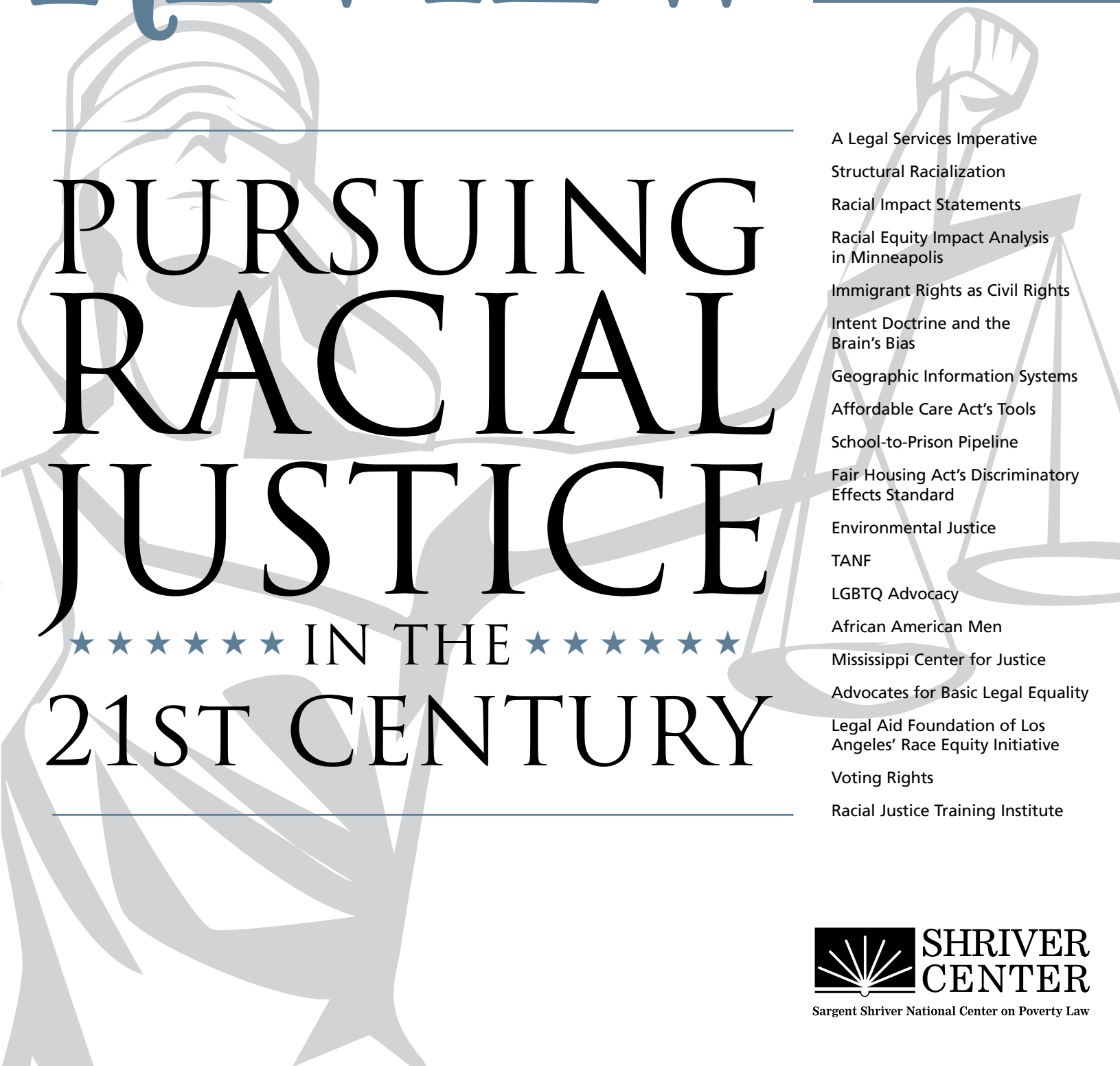
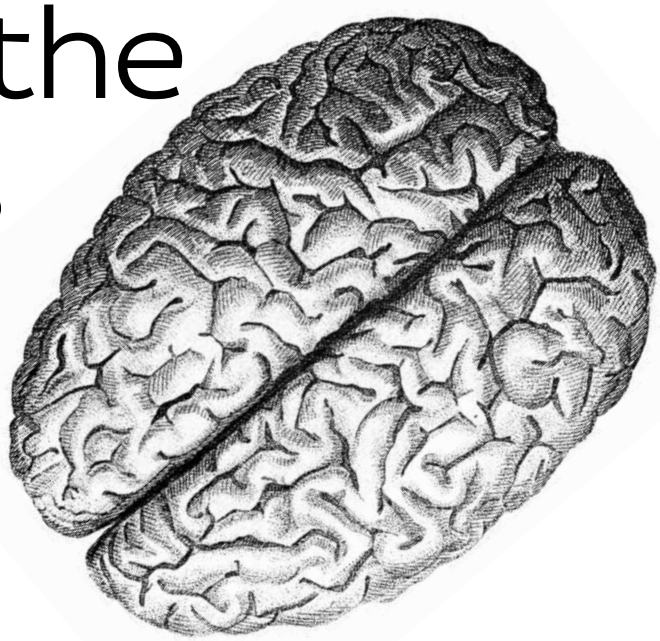
Clearinghouse REVIEW
Journal of Poverty Law and Policy
September–October 2013
Volume 47, Numbers 5–6

PURSUING RACIAL JUSTICE IN THE 21ST CENTURY



SHRIVER CENTER
Sargent Shriver National Center on Poverty Law

How the Doctrine Facilitates the Brain's Bias



By Kimberly Papillon

Kimberly Papillon
J.D.; Judicial Lecturer and Consultant on Neuroscience and the Law

510.545.3515
Kimberly.papillon@gmail.com

Since the U.S. Supreme Court's 1976 decision in *Washington v. Davis*, which requires plaintiffs to prove that a discriminatory act was intentional in order to obtain relief, civil rights advocates have sought to replace the intent requirement with the "disparate impact" standard.[1] Now neuroscience and the cognitive science of "implicit bias" are offering advocates new ways to challenge the intent doctrine; those sciences are shedding light on how the doctrine sets the cause of civil rights back not only by blocking the injured party from seeking relief for discriminatory acts based on implicit or unconscious racial bias but also by creating a neurophysiological reaction that can *enhance* racial bias.

Neuroscientific, psychological, and statistical studies demonstrate that bias need not be explicit for biased decision making to occur. Racial animus can be implicit, and this unconscious bias and its neurophysiological correlates can predict discrimination against people of color in hiring, job promotion, housing, service provision, effective advocacy, or empathy. In fact, one might contend that the neuroscientific and psychological studies I cite here demonstrate that the intent doctrine is a vestige of pretechnological legal theory, a relic of the legal dark ages.

Neuroscientific studies consistently show that specific areas of the amygdalae, small subcortical nodes in the brain, activate when subjects feel fear, anxiety, and distrust.[2] For example, someone diagnosed with arachnophobia (fear of spiders) will demonstrate a significantly higher level of amygdalae activation when viewing pictures of spiders than pictures of other predatory or ferocious creatures, such as tigers.

---

[1] *Washington v. Davis*, 426 U.S. 229 (1976); see Eva Jefferson Paterson et al., *Forging Ahead Beyond Intent*, 40 Clearinghouse Review 358 (Sept.–Oct. 2006).

[2] Sergi G. Costafreda et al., *Predictors of Amygdala Activation During the Processing of Emotional Stimuli: A Meta-Analysis of 385 PET and fMRI Studies*, 58 Brain Research Reviews 57 (2008); Frank Van Overwalle, *Social Cognition and the Brain: A Meta-Analysis*, 30 Human Brain Mapping 829 (2009).

Functional magnetic resonance imaging studies show a similar brain reaction in many people when they view the faces of African American men.[3] One pioneering study showed a measurable increase in left-superior amygdala activation when white subjects viewed African American male faces compared to when the subjects viewed white male faces.[4] The study noted that the difference was not impressive. However, the study found a surprising, direct correlation between the level of amygdala activation and the results of the race implicit association test, which is a reaction time test that measures implicit bias against African Americans and whites.[5] Test subjects who demonstrated greater bias against African Americans had correspondingly increased fear reactions to the African American faces presented while their brains were being scanned.[6] Statistically significant samples show that between 70 percent and 87.1 percent of whites in the United States demonstrate a bias against African Americans on this test.

Researchers collected, in addition to these implicit measures, *explicit* measures of racial bias from each subject, of the sort the intent standard requires, asking subjects to state whether they held racial preferences. Explicit statements of bias did not correlate with the neurophysiological reactions to the African American and white faces—that is, they did not reveal the implicit bias that, as the research I describe here shows, has severe real-world impact on people of color.

As courts have begun to recognize this impact, more advocates are raising implicit bias in discrimination suits. The Equal Justice Society has been persistent in encouraging courts to incorporate implicit bias concepts into their jurisprudence.[7] In June 2013 the Washington Supreme Court cited an Equal Justice Society law review article in discussing implicit bias in *Washington v. Saintcalle* and saying that Washington's procedures for meeting *Batson v. Kentucky*'s requirements to avoid racial bias in jury selection were not "robust enough."[8] The court cited the article in support of its assertion that "*Batson* recognizes only 'purposeful discrimination,' whereas racism is often unintentional, institutional, or unconscious. We conclude that our *Batson* procedures must change and that we must strengthen *Batson* to recognize these more prevalent forms of discrimination."[9]

Increased Amygdala Activation Based on Afrocentric Facial Features

The effect of race on the brain is intensified by the level of "typically" African or "typically" European facial features. The more African a person's face appears to the viewer, the higher the level of fear as shown on functional magnetic resonance imaging scans. Increased amygdala activation appears in subjects who view faces

[3]David M. Amodio et al., *Neural Signals for the Detection of Unintentional Race Bias,* 15 Psychological Science 88 (2004).

[4]Elizabeth A. Phelps et al., *Performance on Indirect Measures of Race Evaluation Predicts Amygdala Activity*, 12 Journal of Cognitive Neuroscience 729 (2000).

[5]Interested persons may take the test online at http://hvrd.me/GBrS. See also B.A. Nosek et al., *Pervasiveness and Correlates of Implicit Attitudes and Stereotypes*, 18 European Review of Social Psychology 36–88 (2007), and A.G. Greenwald et al., *Understanding and Using the Implicit Association Test: III. Meta-Analysis of Predictive Validity*, 97 Journal of Personality and Social Psychology 17–41 (2009).

[6]Phelps et al., *supra* note 4.

[7]Equal Justice Society has also submitted amici briefs on this topic in several cases, most recently on behalf of social and organizational psychologists in *Fisher v. University of Texas*, 133 S. Ct. 2411 (2013). For more information, see Paterson et al., *supra* note 1.

[8]*Washington v. Saintcalle*, No. 86257-5 (Aug. 1, 2013), http://bit.ly/1f5CJl1, citing *Batson v. Kentucky*, 476 U.S. 79 (1986); see Eva Paterson et al., *The Id, the Ego, and Equal Protection in the 21st Century: Building upon Charles Lawrence's Vision to Mount a Contemporary Challenge to the Intent Doctrine,* 40 Connecticut Law Review 1175 (2008).

[9]*Washington*, No. 86257-5, at 2.

with more pronounced Afrocentric facial features (broad nose, full lips, curly hair, and dark skin).[10]

These reactions would be of merely academic interest if they did not correlate with complex decisions by explicitly fair actors. Implicit bias can, even absent intent, affect the motivation to punish or penalize; help or advocate; and accurately assess qualifications and character and predict behavior.

Implications of Amygdala Activation

In multiple arenas people with decision-making authority act on the basis of biases of which those individuals are entirely unaware. Below I give examples of research that documents the implications of such implicit bias.

Criminal Sentencing. Afrocentric facial features affect the length and type of sentences given to inmates.[11] Jurors are more likely to impose death sentences on defendants who have higher levels of Afrocentric facial features.[12]

Afrocentric facial features also affect the length of sentences.[13] "Mug shot" faces of African American and white men who had been convicted of felonies in Florida were coded for Afrocentric features on a scale of 1 to 9. Researchers then controlled for other factors such as seriousness and number of the primary offense, additional concurrent offenses, and prior offenses.

African American inmates with more Afrocentric features received longer sentences. The sentences of those with faces one standard deviation greater than the norm for Afrocentric features were seven to eight months longer than sentences of inmates with faces one standard deviation below the norm, a 2 percent increase in sentence length. While this may seem minor, an additional concurrent serious offense increased the sentence length by 3 percent—almost as much. In other words, having a broader nose, darker skin, fuller lips, and curlier hair equated to an additional serious criminal charge.

Surprisingly, white inmates with Afrocentric features also received longer sentences than their white counterparts with more Eurocentric features. Once again, inmates who were one standard deviation above the norm for Afrocentric features received sentences seven to eight months longer than inmates who were one standard deviation below.

Employment. Employers may seek to penalize workers for occasional mistakes but must do so without racial animus. In one experiment participants were asked to count the number of circles on 130 successive slides that quickly flashed on a computer screen.[14] For half of the participants, a picture of an African American man was flashed subliminally on the screen while they counted the circles; for others a picture of a white man was flashed. After the last slide the computer

---

[10]Jaclyn Ronquillo et al., *The Effects of Skin Tone on Race-Related Amygdala Activity: An fMRI Investigation*, 2 Social Cognitive and Affective Neuroscience 39 (2007). Multiple studies demonstrate that people apply stronger racial stereotypes to African Americans who have more pronounced Afrocentric facial features than to those with weaker Afrocentric facial features (Keith B. Maddox, *Perspectives on Racial Phenotypicality Bias*, 8 Personality and Social Psychology Review 383 (2004); Keith B. Maddox & Stephanie Gray Chase, *Manipulating Subcategory Salience: Exploring the Link Between Skin Tone and Social Perception of Blacks,* 34 European Journal of Social Psychology 533 (2004); see also Y. Moriguchi et al., *Specific Brain Activation in Japanese and Caucasian People to Fearful Faces*, 16 NeuroReport 133 (2005)).

[11]David C. Baldus et al., *Racial Discrimination and the Death Penalty in the Post-Furman Era: An Empirical and Legal Overview, with Recent Findings from Philadelphia*, 83 Cornell Law Review 1638 (1998) (African American defendants receive death penalty more frequently than their Caucasian counterparts). See also Irene V. Blair et al., *The Influence of Afrocentric Facial Features in Criminal Sentencing*, 15 Psychological Science 674 (2004); Irene V. Blair et al., *The Automaticity of Race and Afrocentric Facial Features in Social Judgments*, 87 Journal of Personality and Social Psychology 763 (2004).

[12]Jennifer L. Eberhardt et al., *Looking Deathworthy: Perceived Stereotypicality of Black Defendants Predicts Capital-Sentencing Outcomes,* 17 Psychological Science 383 (2006), http://stanford.io/13hZMag.

[13]Blair et al., The *Influence of Afrocentric Facial Features in Criminal Sentencing*, *supra* note 11; Blair et al., *The Automaticity of Race and Afrocentric Facial Features in Social Judgments*, *supra* note 11.

[14]John A. Bargh et al., *Automaticity of Social Behavior: Direct Effects of Trait Construct and Stereotype Activation on Action*, 71 Journal of Personality and Social Psychology 230 (1996).

crashed. Participants were told that all data had been lost and they would have to begin the exercise again.

Multiple researchers, none of whom knew that the experiment was based on race, then assessed participants' hostility level on a ten-point unipolar scale in four categories: irritability, hostility, anger, and uncooperativeness. All of the researchers rated participants who saw the subliminal African American male pictures as more hostile than those who saw the white male pictures.

Health Care. In a study that explored whether implicit bias as demonstrated on the race implicit association test correlated with ultimate outcomes in complex decision making by intelligent people, researchers presented 287 physicians with a clinical case vignette.[15] In the vignette a 50-year-old patient presents with chest pain and a history of hypertension. Details were designed to suggest a heart attack or stroke related to a blood clot, and the doctors were asked if they would recommend treatment or discharge the patient with no treatment. Some doctors were told that the patient was African American and others were told that the patient was white.

The physicians with the white patient recommended a drug to dissolve blood clots in 58.2 percent of the cases, while the physicians with the African American patient recommended this treatment in 42.7 percent of the cases. In other words, of one hundred African American patients who present with a potential heart attack, fifteen would not receive treatment as a result of the doctor's racial bias.

On the implicit association test, physicians who prescribed the clot-busting drug for white patients demonstrated a preference for whites, while doctors who chose not to treat the African American patients demonstrated a bias against African Americans. Notably, the doctors who showed bias against African Americans were also *more* likely to diagnose the African American patient with coronary artery disease but *less* likely to provide treatment. The complex decision-making process, the commitment of the physicians to egalitarian values, and equal treatment of patients were foiled by implicit bias.[16]

Implicit Bias and Executive Functioning

Besides increasing amygdala activation, racial bias depletes resources needed for other brain functions. Bias in effect diverts resources to meet the level of amygdala and insula reaction, impairing other cognitive skills such as executive functioning, or the ability to plan and to apply appropriate principles, thereby allowing implicit bias to emerge and take over. A functional magnetic resonance imaging study measured impairment of executive functioning in the dorsal lateral prefrontal cortex when whites interacted with African Americans.[17]

In one study involving white participants, some interacted with an African American and some with a white person; participants then performed a task that should have tapped their executive functioning. Those who interacted with the African American before attempting to complete a color-matching test were slower and less accurate and showed diminished activation in their dorsolateral prefrontal cortex.

In this context, if executive functioning is diminished due to neurophysiologic reactions to African Americans, decision makers will be less able to apply the proper rules and standards to decisions about employment, housing, or other areas. Fear, threat, distrust, and diminished executive functioning create a formidable combination for people of color.[18]

---

[15]Alexander R. Green et al., *Implicit Bias among Physicians and Its Prediction of Thrombolysis Decisions for Black and White Patients*, 22 Journal of General Internal Medicine 1231 (2007).

[16]*Id*.

[17]Jennifer A. Richeson & Sophie Trawalter, *Why Do Interracial Interactions Impair Executive Function? A Resource Depletion Account*, 88 Journal of Personality and Social Psychology 934 (2005); Jennifer A. Richeson et al., *African Americans' Racial Attitudes and the Depletion of Executive Function After Interracial Interactions*, 23 Social Cognition 336 (2005).

[18]While any racial group may show in-group preference, a majority of U.S. judges are white (see Carl Tobias, *Commentary: Diversity and the Federal Bench*, 87 Washington Law Review 1195 (2010)).

Our biases not only affect the way we process information but also the way we collect and store information.[19] In a study on accuracy of memory, participants were asked to engage in an e-mail conversation with Harvard undergraduates and were told that one fictitious student, Amy Chen, was an Asian American woman.[20] Each of three groups of participants used a different e-mail address to reach her: amy@wjh.harvard.edu (reinforcing Amy Chen's gender), chen@wjh.harvard.edu (reinforcing her ethnicity), or simply ac@wjh.hardvard.edu. As part of the e-mail exchange, "Amy" told each participant her math and verbal SAT scores. The e-mail address used affected the undergraduates' ability to recall Amy's SAT scores accurately. Notably, those who used the e-mail address "chen" remembered a lower verbal SAT score than they had been told and a higher math score. Those who used the e-mail address "amy" remembered the reverse: a higher verbal score than they had been told and a lower math score.

In the employment context, implicit bias can affect an employer's assessment of qualifications stated on a résumé (e.g., years of experience, academic record) or numbers of tardies, mistakes made, or sales completed. Decision makers may mentally alter the information they receive to fit expectations, so that the assessment of a job applicant's competence or qualifications is thwarted due to implicit bias.

How the Intent Doctrine Fosters Bias

The intent doctrine removes the external cue that, in many individuals, activates neurophysiological reactions that can inhibit implicit bias. Neuroscience reveals that when people believe they will suffer no negative consequences from bias, the parts of the brain *least* able to prevent bias will activate. Simply telling people to remove implicit bias from their decision making is not effective.[21] However, if people anticipate a penalty or even disapproval from others for allowing implicit bias to affect their decisions, the parts of the brain that activate are those that are most effective at removing implicit bias.

An experiment on error perception demonstrates this concept well. Participants watch as a computer flashes pictures of a male face, either African American or white, quickly followed by pictures of a weapon or a tool; participants then are asked to identify the object quickly. Numerous studies have found that when the picture of the African American precedes the object, people are more likely to identify tools mistakenly as weapons and identify the weapons correctly. Conversely, when the picture of a white man precedes the objects, people are more likely to identify the weapons mistakenly as tools and identify the tools correctly as tools.

In a variation of this study, participants were told beforehand that certain responses might reveal racial bias. However, half were told that their responses would remain confidential—the *private condition* (represented in the left-hand squares of the "Conditions for Triggering Effective Bias Control in the Brain" diagram on page 183). The other half were told that the experimenter would analyze their responses to determine their level of bias—the *public condition* (represented in the right-hand squares of the diagram).

Participants were also tested to determine whether they cared more about actually being biased or being perceived by others as biased. Those who cared more about others' perceptions were labeled *externally motivated* (represented in the two bottom squares of the diagram)

[19]Anat Maril et al., *Feeling-of-Knowing in Episodic Memory: An Event-Related fMRI Study*, 18 NeuroImage 827 (2003); Jason P. Mitchell et al., *fMRI Evidence for the Role of Recollection in Suppressing Misattribution Errors: The Illusory Truth Effect*, 17 Journal of Cognitive Neuroscience 800 (2005).

[20]Todd L. Pittinsky et al., *Identity Cues: Evidence from and for Intra-Individual Perspectives on Stereotyping* (John F. Kennedy School of Government, Harvard University, Working Paper No. rwp05-010, 2005), http://bit.ly/1e7w3qc.

[21]Patricia G. Devine et al., *The Regulation of Explicit and Implicit Race Bias: The Role of Motivations to Respond Without Prejudice*, 82 Journal of Personality and Social Psychology 835–48 (2002); John F. Dovidio et al., *Stereotyping, Prejudice and Discrimination: Another Look*, in Stereotypes and Stereotyping 276 (C. Neil Macrae et al. eds.,1996).

Conditions for Triggering Effective Bias Control in the Brain

Private condition (any bias kept confidential, so no penalty) + Internal motivation (concerned primarily about actual rather than perceived bias)	Public condition (bias may be revealed, triggering disapproval or penalty) + Internal motivation (concerned primarily about actual rather than perceived bias)
Private condition (any bias kept confidential, so no penalty) + External motivation (concerned primarily about others' perceptions)	**Most Effective** Public condition (bias may be revealed, triggering disapproval or penalty) + External motivation (concerned primarily about others' perceptions)

while those who cared more about actually being biased were labeled *internally motivated* (top two squares of the diagram). Among the test participants any individual could be assigned either the private or public condition and be externally or internally motivated. The four possible combinations are set forth in the diagram.

Researchers monitored participants' brain activity as they tried to identify the weapons and the tools. A part of the brain called the rostral anterior cingulate cortex (rACC) is particularly effective at avoiding bias and making accurate decisions; in activities such as weapon identification it helps people perceive their potential errors based on bias and then process more complex ideas about how other people will respond to their behavior.[22]

Conversely, another part of the brain, the dorsal anterior cingulate cortex (dACC) activates to try to catch mistakes based on bias but is less effective when people are externally motivated, that is, when people believe they will be publicly judged or penalized for their mistakes.

In people who were told that their responses would remain private, the dorsal anterior cingulate cortex—the section that is *less* effective in catching mistakes based on bias—activated as they tried to catch and correct mistakes before hitting the wrong key. It also activated in people who cared more about whether they were actually biased than about others' perceptions of them as biased. However, these groups still made errors on the weapon identification test; they identified tools as weapons when an African American face was flashed on the screen.

[22]Markus Ullsperger & D. Yves von Cramon, *Subprocesses of Performance Monitoring: A Dissociation of Error Processing and Response Competition Revealed by Event-Related fMRI and ERPs*, 14 NeuroImage 1387 (2001); Vincent van Veen & Cameron S. Carter, *The Timing of Action-Monitoring Processes in the Anterior Cingulate Cortex*, 14 Journal of Cognitive Neuroscience 593 (2002); Hugh Garavan et al., *A Midline Dissociation between Error-Processing and Response-Conflict Monitoring*, 20 NeuroImage 1132 (2003); George Bush et al., *Cognitive and Emotional Influences in Anterior Cingulate Cortex*, 4 Trends in Cognitive Science 215 (2000).

The rostral anterior cingulate cortex—the area of the brain that is *more* effective in avoiding bias—activated significantly in only one group: participants who believed that their bias responses would be made public *and* who cared more about public perception than actual fairness. In these subjects—those represented by the lower-right corner of the diagram—implicit bias was well controlled by their rostral anterior cingulate cortex. In all of the other combined conditions the less effective dorsal anterior cingulate cortex activated instead.

The intent doctrine creates circumstances that mimic the "private condition" assurance of confidentiality, where accuracy is not enhanced and bias not minimized. If people believe that their discriminatory acts, whether explicit or implicit, will remain hidden and result in no public censure or other negative consequence, then only the less accurate dorsal anterior cingulate cortex portion of their brains will activate, undermining any effort to avoid bias. Activation of the more accurate rostral anterior cingulate cortex, which is better suited to avoiding biased behavior and self-correcting before the bias is manifested, will be inhibited. The intent doctrine thus creates the neurophysiological reaction least suited to overcoming bias.

■ ■ ■

The science does not excuse discriminatory conduct; rather, it argues for an expanded definition of culpability for discriminatory conduct. People who care more about being seen as unbiased than about their actual level of bias, and people who act on their implicit biases, should not be allowed to create illusions of fairness by pretending that because bias is only implicit, it is less real. The entire decision-making process, including the implicit or unconscious components, should be included in the analysis of discriminatory intent.

Because it operates below a conscious level, implicit bias may harm people of color in multiple ways and yet escape the net of the intent doctrine. Scientific and statistical evidence confirms that racial bias is a factor in decision making in multiple, critical contexts. Bias that is implicit is no less insidious, injurious, and lasting. Legal advocates working on behalf of racial justice should become familiar with this growing body of evidence.

Subscribe to Clearinghouse Review!

Clearinghouse Review: Journal of Poverty Law and Policy is the advocate's premier resource for analysis of legal developments, innovative strategies, and best practices in representing low-income clients. Each issue of the Review features in-depth, analytical articles, written by experts in their fields, on topics of interest to lawyers who represent low-income people. The Review covers such substantive areas as civil rights, family law, disability, domestic violence, housing, elder law, health, and welfare reform.

Get Your Online Subscription Today!

- Clearinghouse Review: Journal of Poverty Law and Policy is published online six times per year.
- Your subscription includes online access to the current issue and the archive of articles published since 1967. With this online access—your "site license"—your organization's entire staff will enjoy fully searchable access to a wealth of poverty law resources, accessible from any computer or mobile device.
- Newly subscribing individuals and nonprofit programs are entitled to special discounts on our Training Programs.
- Each subscriber receives *Clearinghouse Review News*, a monthly e-newsletter that covers matters of interest to poverty and public interest law practitioners.

CUT HERE

Please fill out the following form to receive more information about subscribing to Clearinghouse Review.

Name _____

Organization _____

Street address _____ Floor, suite, or unit _____

City _____ State _____ Zip _____

E-mail _____

Subscriber	**Annual Price**
☐ Nonprofit organization	$300–$1,800 (varies with size of operating budget)
☐ Law school library	$500
☐ Individual	$400

Please e-mail this form to subscriptions@povertylaw.org.
Or fax this form to Subscriptions at 312.263.3846.

Sargent Shriver National Center on Poverty Law
50 E. Washington St. Suite 500
Chicago, IL 60602