Helping Courts Address Implicit Bias

Resources for Education

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NCSC
National Center for State Courts

Race & Ethnic Fairness in the Courts

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Preface and Acknowledgments

The National Campaign to Ensure the Racial and Ethnic Fairness of America's State Courts was launched in 2006 to mobilize the significant expertise, experience, and commitment of state court judges and court officers to ensure both the perception and reality of racial and ethnic fairness in the nation's state courts. Phase I of the Campaign resulted in an interactive database of promising programs to achieve racial and ethnic fairness in five key areas: (1) diverse and representative state judicial workforces; (2) fair and unbiased behaviors on the part of judges, court staff, attorneys, and others subject to court authority in the courthouse; (3) comprehensive, system-wide improvements to reduce racial and ethnic disparities in criminal, domestic violence, juvenile, and abuse and neglect cases; (4) the availability of timely and high-quality services to improve access to the courts for limited-English-proficient persons; and (5) diverse and representative juries. Phase II of the Campaign focused on implicit bias, an issue relevant to each of the five key areas and central to "fair and unbiased behaviors" in the courthouse. Phase II developed educational resources and provided technical assistance to courts on implicit bias. The results of those efforts are presented in this report to guide others in planning discussions, focus groups, presentations and/or educational programs about the role implicit bias may play in everyday decisions and actions.

The authors wish to thank a number of individuals and organizations who supported and provided assistance during Phase II of the Campaign. Our thanks go first to the Open Society Institute (OSI) and the State Justice Institute (SJI) for their generous support of both Phases of the Campaign. In particular, Dr. Thomas Hilbink from OSI and Ms. Janice Munsterman from SJI were instrumental in crafting the Campaign's Phase II design, and Mr. Jonathan Mattiello ensured SJI's continued support when he became Executive Director.

Led by former Chief Justice Ronald T. Y. Moon of Hawaii, the Campaign's Steering Committee continued to provide overall guidance and included representatives of the Conference of Chief Justices, the Conference of State Court Administrators, the National Consortium on Racial and Ethnic Fairness in the Courts, the National Association for Court Management, the National Association of State Judicial Educators, and the National Association of Women Judges. In addition, project staff also freely relied on the expertise and good will of the members of the National Training Team: the Honorable Ken M. Kawaichi, the Honorable J. Robert Lowenbach, the Honorable Patricia M. Martin, Ms. Kimberly Papillon, and the Honorable Louis Trosch, Jr.

The authors also are grateful to the many judges and court staff who participated in the project's training efforts in California, Minnesota, and North Dakota. We are especially appreciative of the time and energy contributed by each of the site coordinators: Ms. Kimberly Papillon from California, Ms. Connie Gackstetter from Minnesota, and Ms. Lee Ann Barnhardt from North Dakota. They all exhibited a strong professional commitment to delivering a quality program as well as good humor under pressing deadlines.

Table of Contents

Introduction

State courts have worked diligently over the last 25 years to address issues of racial and ethnic fairness. In the late 1980s, state court commissions were formed in the states of Michigan, New Jersey, New York, and Washington to address racial and ethnic bias in their court systems. In January 1989, the four commissions formed the National Consortium of Commissions and Task Forces on Racial and Ethnic Bias in the Courts, later renamed the National Consortium on Racial and Ethnic Fairness in the Courts.[1] Membership in the National Consortium today has grown to include representatives from 37 states and the District of Columbia. During the last 20 years the state commissions have issued voluminous reports and recommendations to improve racial and ethnic fairness in their respective states (see National Center for State Courts' [hereafter, NCSC] State Links for Racial Fairness Task Forces and Reports) and have implemented numerous programs and projects to carry out those recommendations (see, for example, the NCSC's Interactive Database of State Programs to address race and ethnic fairness in the courts).

Despite these substantial efforts, public skepticism that racial and ethnic minorities receive consistently fair and equal treatment in American courts remains widespread. A comprehensive national survey of public attitudes about the state courts commissioned by the NCSC and released at the National Conference on Public Trust and Confidence in the Justice System in May 1999 found that 47% of Americans did not believe that African Americans and Latinos receive equal treatment in America's state courts and 55% did not believe that non-English speaking persons receive equal treatment (NCSC, 1999, p. 37). Moreover, more than two-thirds of African Americans thought that African Americans received worse treatment than others in court (p. 38). State surveys, such as the comprehensive public opinion survey commissioned by the California Administrative Office of the Courts (Rottman, 2005, p. 29), confirmed the earlier national survey results. A majority of all California respondents stated that African Americans and Latinos usually receive less favorable results in court than others. About two-thirds believed that non-English speakers also receive less favorable results. Once again, a much higher proportion of African Americans, 87%, thought that African Americans receive unequal treatment.

What explains the disconnect between the extensive work undertaken by state courts to ensure racial and ethnic fairness and lingering public perceptions of racial unfairness? At least one explanation may be found in an emerging body of research on implicit cognition. This research shows that individuals develop implicit attitudes and stereotypes as a routine process of sorting and categorizing the vast amounts of sensory information they encounter on an ongoing basis. Implicit, as opposed to explicit, attitudes and stereotypes operate automatically, without awareness, intent, or conscious control. Because they are automatic, working behind-the-scenes, they can influence or bias decisions and behaviors, both positively and negatively,

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[1] When available, the authors cite internet sources that can be accessed directly from the on-line version of this report.

without an individual's awareness. This phenomenon leaves open the possibility that even those dedicated to the principles of a fair justice system may, at times, unknowingly make crucial decisions and act in ways that are unintentionally unfair. Thus although courts may have made great strides in eliminating explicit or consciously endorsed racial bias, they, like all social institutions, may still be challenged by implicit biases that are much more difficult to identify and change.

The problem is compounded by judges and other court professionals who, because they have worked hard to eliminate explicit bias in their own decisions and behaviors, assume that they do not allow racial prejudice to color their judgments. For example, most, if not all, judges believe that they are fair and objective and base their decisions only on the facts of a case (see, for example, Rachlinski, Johnson, Wistrich, & Guthrie, 2009, p. 126, reporting that 97% of judges in an educational program rated themselves in the top half of the judges attending the program in their ability to "avoid racial prejudice in decisionmaking"). This belief may actually undercut the effectiveness of traditional educational programs on diversity that focus on explicit bias. Judges and other court professionals may be less motivated to attend and fully participate in educational programs discussing racial and ethnic fairness if they do not view themselves as explicitly biased.

In addition, educational programs that do not discuss implicit biases may lead participants to conclude that they are better at understanding and controlling for bias in their decisions and actions than they really are. Stone and Moskowitz (2011, p. 772) note that "research on stereotyping finds that although teaching people how to avoid explicit bias may control it at certain points in an interaction, it may also ironically increase the likelihood that stereotypes are activated and unknowingly used early in the impression formation and interaction process." Alternatively, educational programs that discuss the scientific research on how the human brain categorizes and uses information and the implications of unconscious stereotype activation may have the benefit both of engaging participants in a less threatening discussion of bias and providing a fuller picture of how biases may be triggered and come to influence decisions and actions. Promoting awareness about implicit sources of bias in this way may help motivate participants to do more to correct for bias in their own judgments and behaviors (Burgess, van Ryn, Dovidio, & Saha, 2007; also see Appendix G for more information about potential strategies to address implicit bias).

This report explores the content and delivery of educational programs on implicit bias for judges and court staff. It draws upon an extensive literature on implicit bias, the perspectives of expert practitioners and scholars in the area, the development and delivery of judicial education programs on implicit bias in three states, and a focus group of judges and judicial educators interested in strategies to address the influence of implicit bias in court settings. It begins with a brief overview of the concept of implicit bias, provides a summary of the educational strategy used to deliver information on implicit bias in each of the three states, and offers lessons learned based on the synthesis of information across the literature, state educational programs, and expert discussions.

Implicit Bias Overview

During the last two decades, new assessment methods and technologies in the fields of social science and neuroscience have advanced research on brain functions, providing a glimpse into what Vedantam (2010) refers to as the "hidden brain". Although in its early stages, this research is helping scientists understand how the brain takes in, sorts, synthesizes, and responds to the enormous amount of information an individual faces on a daily basis. It also is providing intriguing insights into how and why individuals develop stereotypes and biases, often without even knowing they exist.

The research paints a picture of a brain that learns over time how to distinguish different objects (e.g., an apple and an orange) based on features of the objects that coalesce into patterns. These patterns or schemas help the brain process information efficiently—rather than figuring out what an apple is every time it encounters one, the brain automatically recognizes it and understands that it is red, edible, sweet, and juicy—characteristics associated with apples. These patterns also operate at the social level. Over time, the brain learns to sort people into certain groups (e.g., male or female, young or old) based on combinations of characteristics as well. The problem is when the brain automatically associates certain characteristics with specific groups that are not accurate for all the individuals in the group (e.g., "elderly individuals are frail'). In his implicit bias primer for courts (see Appendix A), Kang (2009) describes the problem this presents for the justice system:

> Though our shorthand schemas of people may be helpful in some situations, they also can lead to discriminatory behaviors if we are not careful. Given the critical importance of exercising fairness and equality in the court system, lawyers, judges, jurors, and staff should be particularly concerned about identifying such possibilities. Do we, for instance, associate aggressiveness with Black men, such that we see them as more likely to have started the fight than to have responded in self-defense? (p. 2)

What is interesting about implicit biases is that they can operate even in individuals who may not be considered explicitly biased (e.g., Devine, 1989). Scientists have developed a variety of methods to measure implicit bias, but the most common measure used is reaction time (e.g., the Implicit Association Test, or IAT; also see Appendix B, FAQ #3, for more about this and other implicit bias measures). The idea behind these types of measures is that individuals will react faster to two stimuli that are strongly associated (e.g., elderly and frail) than to two stimuli that are less strongly associated (e.g., elderly and robust). In the case of race, scientists have found that most European Americans are faster at pairing a White face with a good word (e.g., honest) and a Black face with a bad word (e.g., violent) than the other way around. Indeed, even many African Americans are faster at pairing good words with White faces than with Black faces. Research also shows that these implicit biases can influence decisions and behaviors in a variety of real-life settings without the individual's knowledge (Greenwald, Poehlman, Uhlmann & Banaji, 2009; also see Appendix B, FAQ #4, for more information).

Despite conscious efforts to be fair and objective, research also shows that judges may be susceptible to implicit bias as well. Rachlinski, Johnson, Wistrich, and Guthrie (2009), for example, found a strong White preference on the IAT among White judges while Black judges showed no clear preference overall (44% showed a White preference but the preference was weaker overall). The authors also reported that implicit bias affected judges' sentences, though this finding was less robust and should be replicated. Finally, and most importantly for this report, the authors concluded that "when judges are aware of a need to monitor their own responses for the influence of implicit racial biases, and are motivated to suppress that bias, they appear able to do so" (p. 1221).

While motivation to be fair is a good start, it is not enough. Research shows that individuals need to understand what implicit bias is, that it exists, and that concrete steps must be taken to reduce its influence (e.g., see Mendoza, Gollwitzer, & Amodio, 2010; Kim, 2003). These studies show that implicit racial bias is something that can be controlled, but only if individuals are equipped with the tools necessary to address it.

Educational programs on implicit bias offer judges and court staff those tools. Because they focus on science and how the brain works, they offer an opportunity to engage judges and court staff in a fuller dialog on race and ethnic fairness issues, as described by Marsh (2009):

> Recognizing that implicit bias appears to be relatively universal provides an interesting foundation for broadening discussions on issues such as minority over-representation (MOR), disproportionate minority contact (DMC), and gender or age discrimination. In essence, when we look at research on social cognitive processes such as implicit bias we understand that these processes are normal rather than pathological. This does not mean we should use them as an excuse for prejudice or discrimination. Rather, they give us insight into how we might go about avoiding the pitfalls we face when some of our information processing functions outside of our awareness. (p. 18)

Social science research on implicit stereotypes, attitudes, and bias has accumulated across several decades into a compelling body of knowledge and continues to be a robust area of inquiry, but the research is not without its critics (see Appendix B, FAQ #5, for a discussion of key criticisms). There is much that scientists do not yet know. This report is offered as a starting point for courts interested in exploring implicit bias and potential remedies, with the understanding that advances in technology and neuroscience promise continued refinement of knowledge about implicit bias and its effects on decision making and behavior.

The report does not review the substantial body of research on implicit bias. Rather it offers two summary documents for readers interested in learning more. Appendix A includes *Implicit Bias: A Primer for Courts* by Professor Jerry Kang, and Appendix B includes a set of frequently asked questions on implicit bias:

- What is implicit bias?
- What do researchers think are the sources of implicit bias?

- How is implicit bias measured?
- Does implicit bias matter much in the real world?
- What are the key criticisms of implicit bias research?
- What can people do to mitigate the effects of implicit bias on judgment and behavior?
- Can people eliminate or change implicit bias?

Both of these documents summarize the key research on implicit bias, offer references to source materials, and can be used as background readings or handouts in judicial education programs.

Judicial Education on Implicit Bias: Three Examples

This section describes the efforts of three states that participated in a national project to provide information on implicit bias to judges and court staff.[2] Table 1 presents the template the project used for working with the three states: California, Minnesota, and North Dakota.[3] The template walks planners through the process of articulating why and how the education program will be delivered. It also serves as a starting point for other jurisdictions interested in developing a program on implicit bias.

Achieving the long-term goal, described in Table 1, of reducing the influence of implicit bias on the decisions and behaviors of judges and other court staff requires a concerted effort across time. It involves a multi-step process of building awareness that implicit bias exists, helping participants understand their own implicit biases, exploring the potential influence of their implicit biases on their decisions and behaviors, and taking steps to mitigate the influence. Jurisdictions engaged in a long-term effort to reduce implicit bias should understand that the three programs described in this report are only one component of this multi-step process.

Because the national project was available to work with the selected states for only a finite period of time, the focus was on developing a specific program and identifying the short-term outcomes (see column four in Table 1) resulting from the program. The project examined how judges and court staff reacted to the information. It did not measure the long-term effects (see column five in Table 1) of education on implicit bias.

A description of each program's specific objectives, target audience, inputs and resources, processes and activities, outputs, and outcomes follows. General observations across all sites are:

- *Program objectives*. In general, because the states had a limited amount of time to introduce new judicial education material, all of the programs focused primarily on the first objective in Table 1—demonstrating a basic understanding of implicit bias— and provided relatively less time to explore strategies (second objective) and develop action plans (third objective) to address implicit bias.

- *Target population* varied across states. One state focused primarily on judges, another on general members of the Judicial Branch, and another on the members of a Racial Fairness Committee, including representatives from the court as well as community organizations.

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[2] See "Preface and Acknowledgments" for information on the national project.
[3] The three states were selected through an application process.

- *Inputs and resources* specified in Table 1 refer to the unique aspects of a state's program on implicit bias and do not include resources such as meeting rooms and notebooks that are part of most education programs. Appendices C, D, and E include copies of resources available to the national project from the California, Minnesota, and North Dakota programs, respectively. In addition, all three states provided information on the Implicit Association Test (IAT), an on-line reaction-time assessment of preferences (see Project Implicit Web site; see also Appendix B, FAQ #3). Two of the states provided a link to a secure IAT site set up for the project, and the other chose to link to the general public site. Program inputs also included questionnaires to assess implicit bias knowledge before and after the delivery of a state's program. The questionnaires were developed by the national project team in consultation with the state program coordinators. The national project team also developed an on-line questionnaire to obtain participant impressions and actions taken several months after the delivery of one state's program.

Table 1. Template for Implicit Bias Program Development

Long-term Goal: To reduce the influence of implicit bias on the decision making and other behaviors of judges and court staff

Objectives: As a result of participation in the implicit bias program, participants will be able to:
- Demonstrate a basic understanding of implicit bias
- Identify possible strategies to mitigate the influence of implicit bias on behavior
- Develop an individualized action plan to address implicit bias

Target Population: Judges and other court staff

Inputs/Resources	Processes/Activities	Outputs	Outcomes	Impact
▪ Program Content ▪ Delivery methods/ presentation strategies ▪ Onsite experts, trainers, facilitators	▪ Provide pre-program work ▪ Provide implicit bias information using specified curriculum delivery strategies (e.g., lecture, interactions with subject matter experts, small group discussions) ▪ Administer a pre- and post-test of implicit bias knowledge ▪ Administer follow-up questionnaire to determine post-program effects	▪ Number of participants in program ▪ Number of completed pre- and post-tests of implicit bias knowledge	▪ Participants express satisfaction with the training ▪ Participants demonstrate increase in implicit bias knowledge ▪ Participants develop individualized action plan to address the influence of implicit bias on their behaviors	• Judges/court staff engage in activities to address their implicit biases • There are observable changes in judicial & staff decisions and behaviors ▪ Disparate case outcomes based on race and ethnicity are reduced

- The *processes and activities* varied based on program content and delivery methods. Each state administered a pre- and post-program questionnaire.

- *Outputs* refer to the work accomplished during the training session. The number of participants in the training program and the number of completed pre- and post-program assessment questionnaires serve as two measures of program outputs.

- For purposes of the national project, the primary outcome measures were whether participants were satisfied with the program (e.g., how did they react to a program on this topic) and whether their knowledge of implicit bias increased pre- and post-program. The project also examined whether or not participants planned to take some follow-up actions (e.g., learn more about implicit bias and take some steps to attenuate its influence) as a result of the program. The questions on the pre- and post-program assessment questionnaires differed somewhat by state because of (a) variations in key concepts emphasized in the three programs and (b) learning about which questions worked better as the project progressed from one state to the next.

The remainder of this section describes the specific program elements for each state.

California

Program Objectives. California's program focused on the science of implicit bias, e.g., what it is, how it develops, and how it is measured, and provided a brief overview of strategies to mitigate its influence. The program coordinator also created a Web site (see Figure 1) for participants to learn more about strategies to address implicit bias. Subsequent programs, not included in this report, addressed strategies and action planning (see objectives in Table 1) more directly and thoroughly.

Figure 1: California Web Site

Target Population. Because the program was offered through the court system's closed circuit cable television station, any member of the Judicial Branch could participate in the program. Among those who watched the broadcast were judges and other judicial officers, court professionals, attorneys, clerks, and support staff. The program was shown three times and was advertised in newsletters, letters to educational coordinators in each courthouse, and emails

and phone calls to other individuals who might be interested in the program. The program also was posted on the California Web site for viewing by anyone interested in seeing the program after its initial broadcasts.

Inputs/Resources. Table 2 summarizes the inputs and resources used in the California program. Appendix C includes California program materials available to the national project.

California chose video as the medium for providing information on implicit bias. The program coordinator videotaped interviews with national experts in the field and created an hour-long documentary. The program's Web site, The Neuroscience and Psychology of Decisionmaking (see Figure 1), provided links to the documentary and additional resources to help address the influence of implicit bias. Among the resources was a link to the Implicit Association Test (IAT).

Although California relied on experts in developing the documentary, the state did not provide on-site experts during the actual broadcast of the program. The original plan for the program included post-broadcast conference calls with experts to discuss selected readings on various issues presented

Table 2. California Inputs/Resources
▪ Developed *The Neuroscience and Psychology of Decision-Making: A New Way of Learning*, a one-hour video documentary of scientists and judges discussing research in neuroscience and social and cognitive psychology that demonstrates how unconscious processes may affect decisions.
▪ Developed Web site with access to a secure IAT site and additional resources for viewers to explore after watching the documentary
▪ Developed pre- and post-program evaluation

in the documentary. However, because of staff and other resource issues, the conference calls did not take place during the course of the national project.

Processes/Activities. California did not provide participants with any readings in advance of broadcasting the documentary. To administer the pre- and post-assessment of viewers' knowledge of implicit bias, the site coordinator worked with several jurisdictions to set up a central screening room in which questionnaires could be distributed to and collected from viewers. The documentary was aired at three different times and posted on the Judicial Branch Web site. The documentary encouraged viewers to take advantage of the various resources located on the program's Web site page.

Outputs. Because California's program was broadcast on the Judicial Branch's cable television station and posted on the internet, there is no way to know how many individuals across the state watched the video. Web site statistics show over 350 hits in the first two months after the documentary's broadcast. In addition, sign-in sheets at the central screening sites indicate that at least 107 individuals watched the program at these locations. Of these, information is available on 71 individuals who completed at least a partial pre- and post-

program assessment questionnaire.[4] These individuals represent a variety of positions in the court (e.g., judges, court staff, attorneys, clerks) with no one position identified by more than 22 percent of respondents (see Table C-1 in Appendix F). Almost 65 percent had at least five years of experience, and 66 percent indicated they had minimal knowledge of the topic (see Tables C-2 and C-3 in Appendix F).

   Outcomes. As shown in Table 3, at least 90 percent of the 60 California viewers responding expressed satisfaction with the documentary, thought it was effective in delivering information on implicit bias, and planned to apply the information in their work. As indicated in Table 4, content knowledge generally was better after watching the documentary.[5] The percentage of correct responses across all viewers increased from the pre-assessment to the post-assessment (see ☑ columns in Table 4) for all items.[6] However, not all viewers improved pre- and post-assessment. Tables C-4 and C-5 in Appendix F display the percentage of correct and incorrect responses for those who scored correctly and incorrectly, respectively, on the pre-program assessment.

Table 3. California Participants' Satisfaction and Likely Use of Program Content (n=60)

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
1. Overall, I am satisfied with this documentary program	48%	45%	7%	0%	0%	100%
2. The program documentary was effective in delivering content	47%	43%	10%	0%	0%	100%
3. I will apply the course content to my work	28%	62%	8%	2%	0%	100%

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[4] Questionnaires were included in the California analyses if at least one question (the same question) was completed on both the pre- and post-assessment questionnaire.

[5] The California pre- and post-assessment questionnaires included eight questions. One question was eliminated from the analyses because it included two correct response options but did not allow respondents to select both. Two other items did not have specific correct answers; rather they gauged opinions about the extent of implicit bias. These items were analyzed separately and thus not included in Table 4.

[6] Tables showing the percentages of correct and incorrect answers for the pre- and post-program assessment questions include percentages for those who did not answer each question. A case could be made that missing responses are an indication that individuals did not know the correct answer and thus should be included with the incorrect responses. However, individuals may not have responded for other reasons such as they were in a hurry, thought the item was poorly worded or did not understand it, or inadvertently skipped the item. By including the missing information, readers can draw their own conclusions. The missing data also provide an indication of which items were the most troublesome or frustrating for individuals and should be revisited before using again.

Table 4. California Program Assessment Results (n=71)

Questionnaire Item (bolded answer is correct)	Pre-Program Responses*			Post-Program Responses*		
	☑	☒	?	☑	☒	?
1. Implicit or unconscious bias: (a) Is produced by the unconscious processing of stereotypes, (b) Is not influenced by an individual's belief that people should all be treated the same, (c) Is difficult to alter, (d) **All of the above**	66%	32%	1%	73%	25%	1%
2. Which of the following techniques have been shown to limit the influence of implicit or unconscious bias? (a) Judicial intuition, (b) Morality plays, (c) **Exposure to positive, counter-stereotypical exemplars**, (d) All of the above	52%	42%	6%	66%	28%	6%
3. The Implicit Association Test (IAT): (a) Measures reaction time, (b) Pairs a value judgment (e.g., good or bad) with a stimulus such as a photo of someone, (c) Is better suited for educational rather than diagnostic purposes, (d) **All of the above**	37%	49%	14%	56%	42%	1%
4. What is the best evidence that implicit bias exists? (a) Analysis of criminal justice statistics, (b) **Scores on tests that measure implicit bias (e.g., IAT) have been shown to correlate with behavior**, (c) Self-reports, (d) All of the above	31%	58%	11%	62%	38%	0%
5. Which of the following techniques have <u>not</u> been used to measure implicit bias? (a) Implicit Association Test (IAT,) (b) **Polygraph**, (c) MRIs, (d) All of the above	38%	45%	17%	94%	6%	0%

*☑ =correct response, ☒=incorrect response, ? =no response

Two additional questions gauged viewers' opinions regarding the frequency with which implicit biases might be activated. The assumption was that viewers would see implicit biases as influencing decisions and actions more often after they watched the documentary. Figures 2 and 3 demonstrate that the assumption was correct: More viewers rated the prevalence of implicit bias as higher after seeing the documentary.

The write-in comments from viewers who completed the pre- and post-program assessment questionnaires indicated that they found the documentary interesting and surprising (e.g., "raising my awareness of prevalence of implicit bias," "enlightened me on the penetration of implicit bias in everyday life, even though I consciously strive to be unbiased and assume most people try to do the same," and "greater awareness—I really appreciated the impressive panel of participants; I really learned a lot, am very interested"). Many viewers indicated they would take additional action such as explore the topic further, visit the Web site and review the resources, take an IAT, or generally try to be more aware of their own implicit biases.

Figure 2. Pre and Post Documentary Ratings of Pervasiveness of Implicit Bias

Question: It has been suggested that a judge's decisions and court staff's interaction with the public can be unwittingly influenced by unconscious bias toward racial/ethnic groups. To what extent do you think that this occurs?
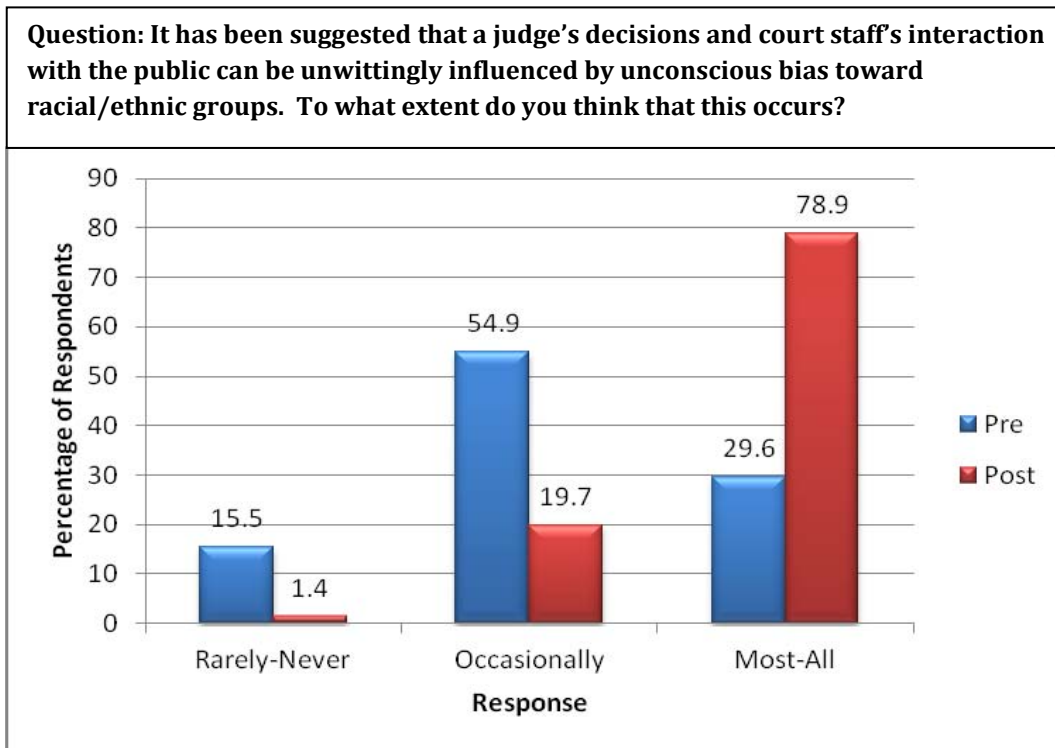
Figure 3. Pre and Post Documentary Ratings of Influence of Implicit Bias if No Explicit Bias

Question: Can a person who is free of explicit racial bias nonetheless be unwittingly influenced by unconscious or implicit racial bias?
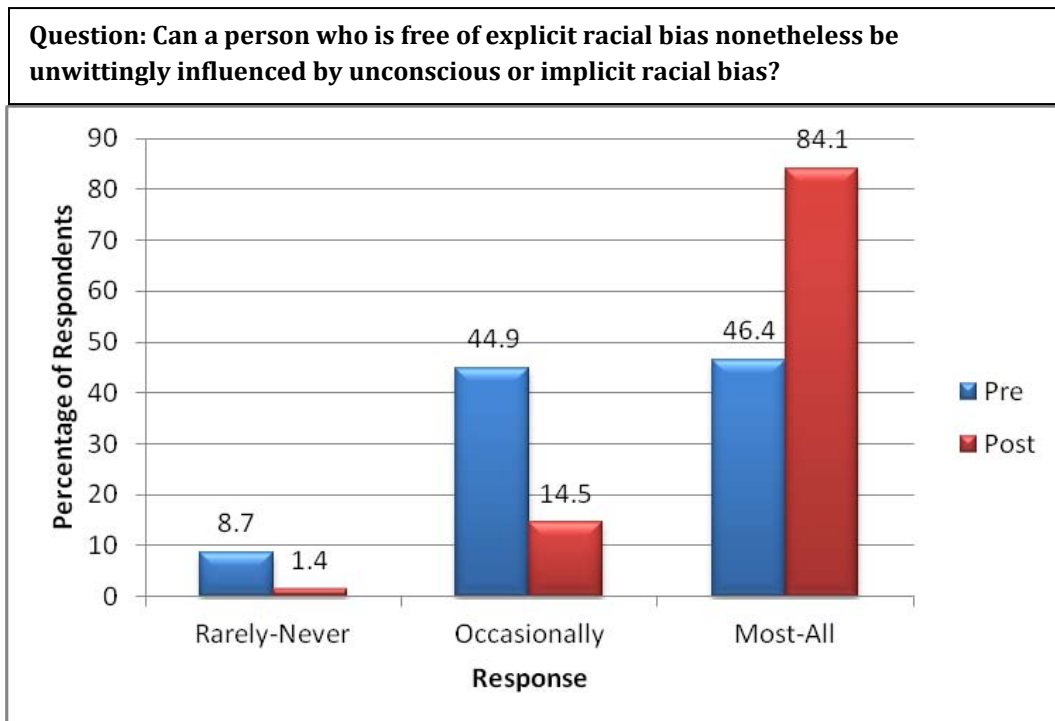
Minnesota

Program Objectives. Minnesota's program sought to engage participants in exploring implicit bias and its potential effects on fairness in the courts. It also began a discussion about possible methods to address implicit bias. Presentation materials (see Appendix D) identified the following objectives for program participants:

- Experience and assess responses to the Implicit Association Test (IAT),
- Understand the research on implicit bias,
- Explore the implications for decision making due to implicit bias in the courts,
- Specify the most critical behaviors affecting fairness that may be subject for dedicated action, and
- Identify personal and professional methods that can reduce the impact of bias.

Target Population. The program planners developed a pilot program for the Judicial Branch Racial Fairness Committee. The intent was to deliver the information to Committee members who would then recommend whether it should be included in new judge or other training. The Racial Fairness Committee included representatives of a variety of criminal justice perspectives (e.g., judge, prosecutor, defender, court interpreter, service agency representative).

Inputs/Resources. Table 5 summarizes the inputs and resources developed and/or used by the program planners. Minnesota incorporated both the California documentary as well as PowerPoint lecture and small group and plenary discussions to deliver program content on the science of implicit bias, the potential effects of implicit bias on the fairness of courts, and possible methods to reduce its impact. (See Appendix D for program materials available to the national project.)

Minnesota chose to develop its own cadre of on-site experts by identifying local faculty and convening conference calls with national experts to gain a better understanding of the subject matter and typical questions raised by court audiences. Assuming the information was well-received by the Racial Fairness Committee, the plan was to have local experts available to provide information about the topic during regularly-scheduled training

Table 5. Minnesota Inputs/Resources

- Convened conference calls with experts to enhance facilitator subject knowledge
- Developed directions for participants to take IAT at Project Implicit Web site prior to training and drafted questions to assess reactions
- Developed 2.5-hour live pilot program on implicit bias and fairness in the courts, including the following elements:
  - Debriefing reactions to IAT in a pairs dialogue
  - Showing documentary produced by California followed by small group and plenary discussions on themes and reactions
  - PowerPoint lecture introducing and reinforcing key implicit bias concepts
  - Small group breakout session on professional and personal methods to manage implicit bias
- Developed pre- and post-program evaluation

sessions such as the new judge orientation program.

Processes/Activities. Minnesota provided program participants with a set of instructions for taking the IAT prior to attending the program. The instructions requested that participants take the Race IAT and a second IAT of their choosing. After taking the IAT, participants completed an on-line survey consisting of six questions about their thoughts and observations related to taking the IAT. Participants discussed their reactions to the experience of taking the IAT during one of the program's small group sessions.

A Minnesota judge and judicial educator led the program that included a PowerPoint presentation punctuated with small group and plenary discussions. A primary component of the Minnesota program included watching and debriefing the California documentary. Participants also spent time discussing what they could do to manage implicit bias both personally and professionally. The program began and ended with participants completing an assessment of their implicit bias knowledge.

Outputs. Minnesota's Racial Fairness Committee consists of 20-25 judges, attorneys, justice system partners, and community representatives. The implicit bias program was opened to all members of the Committee. Because the Committee was considering whether to recommend the program content for new judge orientation programs, the Committee also extended an invitation to a few new judges to gauge their reaction to the material. Twenty-five participants completed at least some portion of the program evaluation. To ensure the anonymity of responses, given the small number and diversity of the participants, Minnesota's evaluation form did not ask questions about the participant's position and length of time in the position.

Outcomes. As shown in Table 6, the majority of participants were satisfied with the program: 82 percent of the 16 participants responding rated the program content medium high to high, 69 percent rated program process medium high to high, and 81 percent rated the program's applicability medium high to high.[7]

Table 6. Minnesota Participants' Ratings of Content, Process, and Applicability (n=16)

Question	Scale Rating: 5=High and 1=Low					
	5	4	3	2	1	Total
1. Overall Rating: Content	44%	38%	12%	0%	6%	100%
2. Overall Rating: Process	50%	19%	25%	6%	0%	100%
3. Overall Rating: Applicability	50%	31%	12%	6%	0%	100%

Of the seven pre- and post-program assessment questions displayed in Table 7 ((see ☑ columns), the number of correct responses increased for four questions, decreased for two, and

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[7] The percentages are based on the responses of 16 of the 25 participants who completed these items on the post-program assessment.

stayed the same for one.[8] (Tables M-1 and M-2 in Appendix F display the percentage of correct and incorrect responses for those who scored correctly and incorrectly, respectively, on the pre-program assessment.) Because the Minnesota results are based on a small number of respondents, they should be interpreted with caution.[9]

Table 7. Minnesota Program Assessment Results (n=17)

Questionnaire Item (bolded answer is correct)	Pre-Program Responses*			Post-Program Responses*		
	☑	☒	?	☑	☒	?
1. Implicit bias: (a) Is produced by the unconscious processing of schemas and stereotypes, (b) Is not influenced by an individual's belief that people should all be treated the same, (c) Is difficult to alter, (d) **All of the above**	53%	47%	0%	65%	35%	0%
2. Which of the following thought processes are activated automatically, without conscious awareness? (a) **Implicit bias,** (b) Explicit bias, (c) Profiling, (d) All of the above	35%	65%	0%	53%	47%	0%
3. Research has shown that unconscious or implicit bias: (a) Exists in only a few jurisdictions in the US, (b) Does not occur in people who are free of explicit bias, (c) **Is related to behavior in some situations,** (d) All of the above	53%	47%	0%	65%	35%	0%
4. The Implicit Association Test (IAT): (a) Measures response time, (b) Pairs a value judgment (e.g., good or bad) with a stimulus such as a photo of someone, (c) Should not be used to diagnose a particular individual as being biased, (d) a and b, (e) **All of the above**	47%	53%	0%	29%	71%	0%
5. Which of the following techniques have been shown to limit the influence of implicit bias? (a) Check lists, (b) Paced, deliberative decision-making, (c) Exposure to positive, counter-stereotypical exemplars, (d) **All of the above**	77%	24%	0%	77%	24%	0%
6. What evidence do we have that implicit bias exists? (a) Analysis of criminal justice statistics, (b) Scores on tests that measure implicit bias (e.g., IAT) have been shown to correlate with behavior, (c) Magnetic Resonance Imaging (MRIs), (d) **b and c**, (e) All of the above	41%	53%	6%	18%	82%	0%
7. Justice professionals can fail to recognize the influence of implicit bias on their behavior because: (a) They are skilled at constructing arguments that rationalize their behavior, (b) The large volume of work they are required to do makes it difficult to be cognizant of implicit bias, (c) They do not believe they are biased, (d) **All of the above**	77%	18%	6%	82%	18%	0%

*☑ =correct response, ☒=incorrect response, ?=no response

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[8] The Minnesota pre- and post-assessment questionnaires included eight questions. One of the items was eliminated from the analyses because a typographical error resulted in a flawed question.

[9] The pre- and post-assessment results are based on the responses of 17 participants who completed at least one question (the same question) on both the pre- and post-assessment questionnaires. Most of the 17 also completed the items in Table 6, but the respondents are not identical for both tables.

A closer look at the frequency of responses to Questions 4 and 6, the two questions that received more incorrect responses on the post-program assessment, reveals that several participants were confused about (a) whether the IAT should be used for individual diagnostic purposes, and (b) whether analysis of criminal justice statistics serves as evidence that implicit bias exists. In retrospect, the confusion about the IAT may stem from the fact that participants were asked to take the IAT prior to the program. The experience of taking an IAT is similar to taking other diagnostic tests, and thus participants may have viewed the IAT as a more authoritative source of feedback about their own implicit racial bias than is warranted. Although the IAT has been shown to be predictive of behaviors in the aggregate – across many people—the test is not currently deemed reliable enough for use as a diagnostic tool at the individual level:

> [I]t is clearly premature to consider IATs as tools for individual diagnosis in selection settings or as a basis for decisions that have important personal consequences. The modest retest-reliability of IAT measures together with the unanswered questions concerning the explanation of IAT effects make evident that potential applications should be approached with care and scientific responsibility. Meanwhile, IATs are a fascinating research tool at the interface of social cognition and personality psychology that help to draw a more holistic picture of individual behavior and experience. (Schnabel, Asendorpf, & Greenwald, 2008, p. 524)

The Minnesota assessment results reinforce the importance of emphasizing this point. Indeed, one of the program facilitators noted that "we should emphasize that the IAT is not a diagnostic tool" in written comments assessing the program.

With regard to the confusion about using criminal justice statistics as evidence of implicit bias, this may have occurred because of discussions about the potential implications of implicit bias for the justice system. During one discussion, some individuals suggested that implicit bias might account partially for the disproportionate representation of ethnic and minority groups in the criminal justice system. Some participants may have heard this discussion of disproportionate minority representation as demonstrating the existence of implicit bias rather than possible implications of implicit bias.

Comments from participants who completed the pre- and post-program assessment questionnaires indicated that they thought the most useful information gained from the session regarded the development and operation of implicit biases (e.g., "causes/reasons for implicit bias; ways to counteract implicit bias both personal and professional" and "brain-neurological discussion"). Several listed actions they were likely to take as a result of the program: For example, "consider ways to increase positive stereotypes—photos in offices, etc." and "try to deal with my biases and learn techniques to counteract."

North Dakota

Program Objectives. North Dakota's program was longer than the California and Minnesota programs and thus had more time to explore the three objectives in Table 1, though relatively more time was devoted to the first objective to ensure participants understood implicit bias concepts. At the start of the program, the presenters identified the following objectives (see presentation materials in Appendix E):

- Normalize the association between information processing and how we relate to others,
- Examine implicit bias and the "condition" of being human, and
- Challenge the notion of being "color-blind."

In addition, the presenters explained that the program was focusing on race but that the concepts extended to many other characteristics or groups and that implicit bias should not be used as an excuse for prejudicial behavior.

Target Population. North Dakota's program targeted participants of its winter judicial conference. The majority of the 44 participants were judges or other judicial officers (e.g., referees). In addition, a few attorneys and members of court administration attended the program.

Inputs/Resources. North Dakota developed resources that included PowerPoint slides, video clips, and small group exercises to deliver content on the automaticity of information processing, the development of stereotypes and implicit attitudes, and strategies to reduce the influence of implicit bias. The project team also developed an on-line questionnaire for North Dakota to obtain participant impressions and actions taken several months after the program was delivered.

With assistance from the national project team, North Dakota identified two national experts—a judge and social psychologist—to deliver its program. As part of its judicial conference, North Dakota also convened a law and literature session led by another national consultant. Although not

Table 8. North Dakota Inputs/Resources
▪ Developed 4-hour live conference presentation on social cognition and decision making, including the following elements: • PowerPoint lecture on social cognition research   • Video clips from *Race: The Power of an Illusion* followed by plenary discussion about race as a social construction and the impossibility of being "color blind"   • Short film *The Lunch Date* followed by plenary discussion of stereotypes   • Small group breakout session on stereotypes   • Small group breakout session on strategies to reduce implicit bias and personal planning   • Background readings   ▪ Faculty included a social psychologist and judge from another state   ▪ Developed pre- and post-program evaluation   ▪ Provided link to secure IAT site   ▪ Developed follow-up questionnaire

part of the national project on implicit bias, the session served to reinforce several of the concepts discussed during the implicit bias program offered earlier in the day.

Processes/Activities. North Dakota provided participants with a copy of *Implicit Bias: A Primer for Courts* (see Appendix A) prior to the start of the implicit bias program. The national faculty, a judge and social psychologist, delivered the program during the afternoon session of the winter judicial conference. After providing information on implicit bias and possible strategies to attenuate its influence, participants worked on individualized action plans to address the influence of implicit bias. Faculty suggested participants take the IAT as one of their action steps. Participants also completed an assessment of their knowledge of implicit bias at the beginning and the end of the program. Approximately four months after the program, the site coordinator requested participants to complete a short on-line questionnaire about the program and any efforts they have made to address their implicit bias**.**

Outputs. Of the 44 participants attending the program, 35 completed at least some questions on the pre- and post-program assessment. Almost all of the participants responding to demographic questions (n=34) were judges with at least five years of experience on the bench (see Tables ND-1 and ND-2 in Appendix F). Only one of the 34 participants listed his or her race as different than White, noting that it was White and Native American (see Table ND-3 in Appendix F). Roughly half of the participants rated their knowledge of the subject as moderate; another 44 percent rated their knowledge as minimal (see Table ND-4 in Appendix F).

Outcomes. As shown in Table 9, 84 percent of the 32 participants responding were satisfied with the program, 97 percent indicated they would apply the course content to their work, and 87 percent considered the presentation effective in delivering the content.[10]

Table 9. North Dakota Participants' Satisfaction and Likely Use of Program Content (n=32)

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total*
1. Overall, I am satisfied with this presentation	25%	59%	12%	3%	0%	99%
2. I will apply the course content to my work	19%	78%	3%	0%	0%	100%
3. The presentation was effective in delivering content	28%	59%	12%	0%	0%	99%

*Total may be less than 100% because of rounding fractional numbers to whole numbers.

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[10] North Dakota's analyses are based on the responses of 35 participants who completed at least one question (the same question) on both the pre- and post-assessment questionnaires. Of the 35, 32 also completed the questions in Table 9.

Of the seven pre- and post-program assessment questions displayed in Table 10 (see ☑ columns), the number of correct responses increased for four questions, decreased for two (although one decreased only slightly), and stayed the same for one.[11] (Tables ND-5 and ND-6 in Appendix F display the percentage of correct and incorrect responses for those who scored correctly and incorrectly, respectively, on the pre-program assessment.).

Table 10. North Dakota Program Assessment Results (n=35)

Questionnaire Item (bolded answer is correct)	Pre-Program Responses*			Post-Program Responses*		
	☑	☒	?	☑	☒	?
1. In general, do you think that it is possible for judges' decisions and court staffs' interactions with the public to be unwittingly influenced by unconscious bias toward particular racial/ethnic groups? (a) Yes, (b) No	100%	0%	0%	100%	0%	0%
2. Research has shown that unconscious or implicit bias: (a) Exists in only a few jurisdictions in the US, (b) Does not occur in people who are free of explicit bias, (c) Is related to behavior in some situations, (d) All of the above	69%	29%	3%	83%	17%	0%
3. Implicit bias: (a) Is produced by the unconscious processing of schemas and stereotypes, (b) Is not influenced by an individual's belief that people should all be treated the same, (c) Is difficult to alter, (d) All of the above	74%	26%	0%	72%	26%	3%
4. Which of the following techniques have been shown to limit the influence of implicit bias? (a) Judicial intuition, (b) Moral maturity enhancement, (c) Exposure to positive, counter-stereotypical exemplars, (d) All of the above	23%	77%	0%	40%	54%	6%
5. The Implicit Association Test (IAT): (a) Measures response time, (b) Pairs a value judgment (e.g., good or bad) with a stimulus such as a photo of someone, (c) Should not be used to diagnose individual bias, (d) All of the above	26%	69%	6%	34%	63%	3%
6. What evidence do we have that implicit bias exists? (a) Analysis of criminal justice statistics, (b) Scores on tests that measure implicit bias (e.g., IAT) have been shown to correlate with behavior, (c) Self-report, (d) All of the above	14%	86%	0%	9%	89%	3%
7. Which of the following techniques has not been used to measure implicit bias? (a) Implicit Association Test (IAT), (b) Polygraph, (c) Paper and pencil tests, (d) MRIs	26%	74%	0%	31%	66%	3%

*☑ =correct response, ☒=incorrect response, ?=no response

Although the percentage of correct responses increased from pre-assessment to post-assessment for the majority of items, four of the items had correct responses of 40 percent or less on the post-program assessment. Of the items that were answered incorrectly by the

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[11] The North Dakota pre- and post-program assessment questionnaires included eight questions. One question was eliminated from the analyses because, in retrospect, it could have been confusing to respondents.

majority of participants, no one clear explanatory pattern emerges from this data. For Questions 4 and 6, a majority of participants answered "all of the above," indicating they may have misread the questions, thought that at least two of the answers were correct, or guessed at the correct response. For Question 5, a majority of participants answered "pairs a value judgment (e.g., good or bad) with a stimulus such as a photo of someone." Although correct, the other responses also were correct; thus the program may not have covered all of the material equally or equally well, or there was a lack of congruence between evaluation items on the tests and the actual curriculum as delivered on-site. Participants may have also guessed when answering Question 7, for which there was no majority—the highest percentage was 40 percent answering "MRIs." In written comments, a few participants expressed that there was a lot of material covered and they would have preferred less time in small groups and more time on lecture and discussion: "more time—feel we went through this rather quickly and I needed more [time] to have a more concrete grasp. But it is a good start—thank you;" "more real experiences – too many slides – too little time – speaker knows subject of slides better than we do;" "too much small group…." Although participants were engaged (other comments noted "keep up the good work!" and "this is a great program!"), they seemed to need more time to fully understand the information and its implications.

Approximately three months after the North Dakota program, the program coordinator sent an email to participants requesting they complete a short, Web-based survey. Only fourteen of the original participants responded to the survey, so the results should not be considered representative of all the participants.

The majority of those responding thought that it was at least somewhat important for judges to be aware of the potential influence of implicit bias on their behavior: On a scale of 1 (unimportant) to 7 (very important), the average rating was 4.7 and the most frequent rating was "6". Most (nearly 70 percent) indicated that they had not made any specific efforts to increase their knowledge of implicit bias; however, most (nearly 77 percent) indicated that they had made efforts to reduce the potential influence of implicit bias on their behavior. Examples of the efforts participants said they had taken are:

- Concerted effort to be aware of bias,
- I more carefully review my reasons for decisions, likes, dislikes, and ask myself if there may be bias underlying my determination,
- Simply trying to think things through more thoroughly,
- Reading and learning more about other cultures, and
- I have made mental notes to myself on the bench to be more aware of the implicit bias and I've re-examined my feelings to see if it is because of the party and his/her actions vs. any implicit bias on my part.

Lessons Learned

The project worked with three states to see how information on implicit bias could be delivered to members of their respective court community. Each state chose a time, venue, and approach for delivering implicit bias content based on its judicial branch education goals, resources, needs, and opportunities. Consequently, the three programs the states developed and delivered differed on a variety of factors and their outcomes cannot be directly compared to one another.

Taken as a group, however, the results of the three programs provide insights about the court community's interest in implicit bias and suggestions for future judicial branch education programs on the topic. This section describes six "lessons learned" or "takeaways" identified by examining the three programs in concert.

1. **Court audiences are receptive to implicit bias information.**

An initial challenge for educators presenting information on implicit bias is whether they can engage audience members in an honest, open, and constructive discussion about personal biases. This may be difficult for a number of reasons, such as participant unwillingness to explore one's own possible biases, an inability to identify those biases, or a concern about acknowledging those biases publicly.

Cultivating audience receptivity and personal accountability may be especially challenging with members of the court community who have been taught to focus on the facts and disregard irrelevant information. Judges have attained an important decision making role in society—a role they acquired based on their past performance. Their ability to exercise impartial and objective judgment is central to their self-identity. Research shows, however, that they tend to overestimate their ability to avoid bias (Rachlinski, Johnson, Wistrich, & Guthrie, 2009). As a consequence, they may not see a need for further education on racial and ethnic fairness issues. Thus one question the project team had at the outset was whether judges and other court professionals would be interested in learning about implicit bias and consider the subject matter relevant to their work.

Table 1 indicates that at least 80% of participants who responded to assessment questions in each state expressed satisfaction with the implicit bias program and saw its applicability to their work. Their comments used adjectives such as excellent, valuable, important, relevant, informative, worthwhile, and eye-opening to describe their reactions to the programs. This does not mean that the programs worked for all participants, but they seemed to work for a large majority.

Given the variation in target audiences and program features across the states (see Table 12), the findings suggest that judges and court professionals in other states also would be receptive to information about implicit bias. Comments from participants indicated that the programs raised their awareness of the presence and prevalence of implicit bias and piqued their interest to explore the topic more. Thus the findings indicate that implicit bias programs

offer judicial educators a vehicle to motivate and engage members of the court community to explore issues of bias.

Table 11. Overall Program Ratings by State

California (n=60)	Minnesota (n=16)	North Dakota (n=32)
• 93% satisfied with this documentary program • 90% will apply the course content to their work	• 81% gave the program content a medium high to high rating • 81% gave the program's applicability a medium high to high rating	• 84% satisfied overall with this presentation • 97% will apply the course content to their work

Table 12. Summary of Implicit Bias Program in Each State

Program Feature	California	Minnesota	North Dakota
Target Audience	• General court community	• Mix of justice system professionals	• Mostly judges
Type of Program	• 1-hour video program	• 2.5-hour in-person program	• 4-hour in-person program
Program Components	• Aired program • Provided Web site for follow-up	• Viewed CA video • Provided lecture, small group discussions and exercises	• Provided lecture, small group discussions, and exercises
Faculty/ Facilitators	• No facilitators on site	• Local judge & judicial educator	• Judge and psychologist from outside of ND

2. **Complexity of the implicit bias subject matter demands time and expertise.**

Table 13 shows that posttest scores improved on all or a majority of the assessment questions across all three programs. However, the results are more complicated to interpret because those who responded correctly to an item on the posttest were not always the same individuals who responded correctly to the item on the pretest, i.e., some participants' knowledge decreased from pretest to posttest.[12] An ideal program reinforces participants' correct answers and changes participants' incorrect answers on the posttest. Incorrect posttest responses may be the result of ineffective delivery of some program information, a poor fit between the evaluation item and program content, participant misunderstanding of the test

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[12] Interpretation of the data is limited by small samples in some jurisdictions (limiting the number of responses on some items) and the representativeness of participants who were willing to complete the pre and posttests.

question, and/or guessing correctly on the pretest question and incorrectly on the posttest question. Based on the number of responding participants who mentioned needing more time to digest the information, incorrect posttest responses likely are also due to the complexity of the subject matter.

Unlike some judicial branch education programs that involve the delivery of factual information on new laws, procedural requirements, or appellate court decisions, education on implicit bias involves social science research that is unfamiliar to most legally-trained individuals and ultimately has behavioral change as its goal. Implicit bias training seeks to improve not only deliberate behaviors like judicial decision-making but also more spontaneous verbal and non-verbal behaviors of judges and court staff. Devine (see Law, 2011, p. 42) reports that combating implicit bias is much like combating any habit and involves specific steps:

- Becoming *aware* of one's implicit bias.
- Being *concerned* about the consequences of the bias.
- Learning to *replace* the biased response with non-prejudiced responses—ones that more closely match the values people consciously believe that they hold.

Table 13. Pre and Posttest Results by Program

Pre and Posttest Results	California (n=71)	Minnesota (n=17)	North Dakota (n=35)
Range of correct posttest responses	56% to 100%	18% to 82%	9% to 100%
Correct responses from pre to posttest	Increased on 5 of 5 questions	Increased on 4 questions, same on 1, decreased on 2	Increased on 4 questions, same on 1, decreased on 2
# of questions that had at least one participant answer incorrectly on posttest after answering correctly on pretest	4 questions	6 questions	6 questions

Judicial educators should understand the difficulty of comprehending the scientific material for many of their program participants and the need to walk participants through the behavioral change process. Spreading the material across several sessions likely will result in better comprehension and application than trying to accomplish all of Devine's steps in one session. Any introductory session, however, should let participants know that there are strategies for addressing implicit bias and that the strategies will be discussed; otherwise, program participants may leave the first session feeling somewhat helpless about what to do. In addition, as with any behavioral change program, continued efforts to periodically revisit implicit bias concepts (e.g., by hosting follow-up or refresher sessions; by integrating the topic into seminars on other, related issues) will promote vigilance and encourage sustained habit formation.

The complexity of the information also requires faculty and facilitators who are experts in the science of implicit bias and who are vigilant about correcting misinformation (e.g., the use of the Implicit Association Test for diagnostic purposes as discussed in Lesson Learned #4) that may arise during discussions about the material. Research on implicit bias continues to expand, and thus those teaching the course need to remain current with new findings. While it is helpful to have judges and other practitioners serve as faculty to reinforce the subject matter's applicability to court audiences, implicit bias program faculty should include at least one subject matter expert to ensure that the science is properly presented and understood.

3. **Tailor implicit bias programs to specific audiences.**

Any judicial branch education program should be based on considerations of the target audience's composition; this is particularly true for programs on implicit bias. Key considerations for program planners are:

- <u>Prior experience discussing race and ethnic fairness issues</u>. To what extent has the target audience participated in other educational programs related to cultural competence and sensitivity? Participants' expectations will vary based on their prior experience. Program planners may need to allow more time for audiences new to discussing these issues and/or for audiences frustrated with the content of prior programs (see, for example, Juhler, 2008).
- <u>Demographic diversity of the state</u>. To what extent have program participants witnessed biased behaviors? In one program, a participant noted that more examples ("anecdotal references") would be helpful given the lack of racial diversity in the work environment. Whereas this type of real-world contextual information may help frame the concept of implicit bias for individuals who live in more homogeneous communities with fewer racial minorities, educators may not need to spend as much time listing or elaborating such examples when training audiences from culturally diverse areas, for whom the real-world applicability of implicit bias may be more readily perceived. Educators also may have more success initially discussing implicit biases in the context of groups with which the audience is more familiar, such as teenagers or the elderly, before discussing implicit biases related to race and ethnicity.
- <u>Audience characteristics</u>. The audiences of the project sites varied in professional orientation, i.e., one program focused on judges while the other two included a wide array of justice system professionals. The audiences also varied on demographic factors such as age, race and ethnicity, and gender, and, as noted above, on prior level of exposure to cultural competency, diversity, and other related educational programs. These differences are important to acknowledge in developing program content and delivery. They will affect the types of examples educators use to relate implicit bias concepts to audience members' every-day work environments as well as examples of strategies for combating implicit bias.
- <u>Audience motivation</u>. How willing is the audience to discuss bias in the court system? One program participant noted that his or her training group seemed

"collectively uncomfortable about talking about their bias."As noted under Lesson Learned #1, court system professionals may believe that they are not as susceptible to bias as those in other fields. They may need to be convinced of the reality of implicit bias and the benefits of the educational program before they become fully engaged in program participation. Educational approaches that incorporate information about the empirical evidence of unintended bias may help promote awareness and instill intrinsic motivation to change. However, educators should avoid relying on extrinsic motivators (e.g., mandatory compliance, punitive measures) as they can engender backlash that escalates and perpetuates prejudice in some individuals (e.g., Plant & Devine, 2001).

4. **Content delivery methods affect participant understanding and satisfaction**

Additional research is needed to identify the most effective combination of content delivery methods for a judicial education curriculum on implicit bias. Regarding the assortment of approaches used in this triad of pilot studies, some noteworthy considerations for judicial educators emerged from direct feedback from pilot participants as well as general knowledge of effective educational delivery methods. Information on the various delivery methods used in the programs follows.

- Video documentary. Overall, California's video documentary was well-received by participants in the California and Minnesota pilot programs and seemed to be an effective mechanism for delivering content about implicit bias. In the feedback provided from participants at both sites, many identified the video documentary as the most beneficial or useful part of their program. Participants indicated that the video was informative, interesting, and enlightening, despite some comments suggesting that the video could benefit from a more rigorous editing process and other comments regarding various technical difficulties (e.g., scratches on the source DVD, insufficient volume for some participants).

  Several participants wanted the documentary to provide more information on strategies to address implicit bias. The greater focus on the science behind implicit bias likely led one participant to comment that "the science was daunting for some participants and made them feel somewhat powerless to change because how do you change how our brains work?" Although the video referenced some strategies, pointed participants to a Web site with additional resources, and indicated that upcoming programs would address solutions in more detail, [13] participant comments indicated an interest in hearing about possible strategies during the initial broadcast.

  A few participants also suggested building exercises into the video and making the content more interactive. One such approach could present the video documentary to a live audience of participants, but parse the video into shorter viewing segments. The California documentary could be paused at three points to produce four

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[13] California produced two additional videos: The Neuroscience and Psychology of Decision making, Part 2—The Media, the Brain, and the Courtroom and The Neuroscience and Psychology of Decision making, Part 3—Dismantling and Overriding Implicit Bias to further explore implicit bias and strategies to address it.

approximately 15-minute clips that (1) provide an introduction to the neurological and psychological science behind bias, (2) explain the IAT, (3) present research illustrating how implicit bias affects real world behaviors, and (4) describe some strategies for addressing implicit bias. Facilitators could then incorporate guided group discussion and/or illustrative experiential exercises into these breaks to reinforce learning as new topics are introduced. If this approach helps clarify and elaborate on difficult concepts and prompt further discussion of practical solutions, perhaps participants will be less likely to feel overwhelmed by the material.

- <u>PowerPoint presentation and lecture</u>. One pilot program presented the educational material on social cognition and implicit bias via a live PowerPoint lecture delivered by a content expert, and another program used PowerPoint lectures to augment information presented in the video documentary. Several participants indicated that, in general, they needed a much slower pace and more time to fully digest such complex information. Some participants mentioned that additional real-world or anecdotal examples that illustrated the phenomenon would have helped them develop a more concrete understanding of the material.

- <u>Small group discussion</u>. In general, skillfully facilitated small group discussions can help raise self-awareness and cultivate more active, engaged participation (e.g., Teal, Shada, Gill, Thompson, Fruge, Villarreal, & Haidet, 2010). Interestingly, however, pilot participants who only viewed an educational presentation about implicit bias showed more consistent improvement from pretest to posttest than those who also engaged in small group discussion following an educational video or lecture. For example, in the results of an assessment question on scientific evidence that implicit bias exists, 62% of participants who viewed only a video documentary provided the correct response (see Table 4), whereas only 18% (see Table 7) and 9% (see Table 10) of participants from each program that incorporated a discussion group component answered this question correctly. Obvious explanations, given the substantial variation among pilot programs and evaluation tests, are that this counterintuitive trend emerged not from differences in learning, but from variations in the evaluation questions and response options used across programs and/or other inherent program differences (e.g., audience composition, content emphasized).

    Another possibility to consider is that these results reflect cognitive processing errors, with group discussion opening the door for some common memory errors to enter and influence participant learning processes. For example, participants may have confused the source of information delivery, attributing or generalizing content they gleaned from peers in group discussion to the knowledgeable expert facilitator in the educational component of the session. Source memory information (i.e., who said it) is more likely to be disrupted than content memory (i.e., what was said), and this is particularly likely to occur when attention and cognitive resources for processing new information are divided (see Mitchell & Johnson, 2000). Alternatively, discussion with and misinformation from others may alter participants' memories of previously learned information; this is more likely to occur when cognitive processing is constrained by factors like time pressure (e.g., Roediger, Meade, & Bergman, 2001; Zaragosa & Lane, 1998).

As noted earlier, some participants thought they would have benefitted from a slower pace and more time to process the information presented on implicit bias. If participants do not have a clear understanding of the material from the educational lecture or video component of the session, it is possible that misinformation may circulate in subsequent group discussions. This misinformation may then either fill in the gaps of a participant's memories about the original educational content or impair accurate recall of what was originally conveyed by the educator or expert (e.g., Zaragoza, Belli, & Payment, 2006; Gabbert, Memon, Allen & Wright, 2004; Gabbert, Memon, & Wright, 2006). The answer is not to eliminate small group discussions but to structure them to increase their effectiveness and avoid misinformation (see below). It is worth noting that several participants at both sites with small group discussion indicated that better structure was needed to more effectively guide conversations. As discussed in Lessons Learned #2, having a subject-matter expert on the science of implicit bias on hand during the educational program would help prevent misinformation and facilitate better participant comprehension of the material.

- <u>Experiential exercises and other illustrative activities</u>. In general, participants commented favorably on exercises such as the Stroop test[14] to demonstrate automatic cognitive processing. Educators, however, should select and use exercises judiciously to reinforce a point and not consume precious time that could be allotted elsewhere. One participant, for example, noted that a story on gender stereotyping was not really necessary in the context of the specific information that was being presented.

All three programs included information on the Implicit Association Test (IAT). One pilot site asked participants to complete the IAT prior to the program and answer a brief questionnaire regarding their thoughts and reactions to taking the test. This exercise was used as the basis for some initial discussion in the program. Participants described the IAT experience as challenging and revealing. The other two sites encouraged participants to take the IAT as a follow-up to the program. Several participants from those two sites thought that it might have been helpful if they had taken the IAT prior to the program or had been given an opportunity to take it during the program.

Although incorporating the IAT into a program may help provide insight and motivation for participants, judicial educators should weigh the IAT's overall value to the course. If the IAT is taken prior to the program, it may unsettle some participants and require a lengthy explanation at the beginning of the program to place participants' results in the proper context. If unplanned, this discussion can use valuable program time. Participants may have fewer questions and concerns about taking the IAT after the

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[14] The Stroop test (Stroop, 1935) may be used to illustrate the concept of reaction time as a measure of automaticity (i.e., that cognitively easy or routine tasks can be performed more quickly or "automatically" than more cognitively challenging tasks). Although several variations of the test exist, in one popular version of the test, participants are asked to read a list of several color words (e.g., "red," "blue," "green") in black ink—which they do easily. They are then given a list of colors that are written in ink colors that are incongruent with the semantic meaning of the word (e.g., "blue" is written in red ink). Rather than read the words, participants are asked to name the ink color of each word. Participants find this task much more difficult. The test demonstrates that for most people, reading has become an automatic process; people must override the semantic meaning of the word in order to name the font color when performing the second task.

program content has been delivered. If the IAT is offered during the program, educators need to consider issues of cost for laptops to connect to the [Project Implicit Web site](#) to take the test as well as privacy issues—some participants may be uncomfortable taking the test in public and possibly having their results visible to others. Some presenters have overcome these concerns by conducting an IAT with program participants as a group. They ask the participants to clap or hit the table to respond to the paired associations. Participants can hear how the pace slows when stereotype-incongruent pairs are displayed on a screen. This approach, however, may not work as well in a program with a small number of participants.

Regardless of whether taking the IAT is incorporated as a program activity, presenters should emphasize that the instrument is educational and not diagnostic in nature (Stanley, Sokol-Hessner, Banaji, & Phelps, 2011). The program assessment question focusing on the IAT was one of the most incorrectly answered items on the posttest for all three programs. Based on the assessment results, many participants may have misunderstood or not fully understood that the IAT is malleable and "that its predictive validity is moderated by situational variables" (Nosek, Greenwald, & Banaji, 2007, p. 285).

- Supplemental resources. Well-advertised Web sites with additional resources (e.g., a link to [Project Implicit](#) where visitors can take an IAT online, recommended supplemental readings, support tools for implicit bias intervention strategies) can encourage participant follow-up by guiding them to an organized, centralized hub of the most relevant and useful resources on the topic.

Intermittently throughout the piloted program in California, participants heard about additional resources available on the California Administrative Office of the Courts' Education Division Web site. At the conclusion of the educational session, several California participants indicated that they planned to visit the program Web site or seek more information about the topic on their own. In addition, the North Dakota conference included a "law and literature" program in the evening following the implicit bias program. Although this session was not considered part of the implicit bias program, participants referred back to information from the implicit bias program as they discussed several short stories. Based on observation, participants seemed to enjoy the opportunity to further discuss the implicit bias concepts in this more informal setting.

To take full advantage of and adapt the delivery methods from the pilot programs, judicial educators should consider, as noted in Lesson Learned #2, planning a series of targeted seminars as opposed to one 2- to 4-hour session. An expanded curriculum would allow more time to supplement primary educational instruction like the California video documentary with interactive and experiential exercises to illustrate concepts and heighten awareness, and would afford participants time to fully digest the complex and thought-provoking information.

A multi-session approach also may improve participant comprehension. Instead of trying to cover all program information in a single session, faculty could present the material in more manageable portions to improve retention. This approach also has the advantage of

reinforcing the educational message over repeated exposures, and thus better facilitating actual behavioral change over time.

Breakout sessions may be more productive and misinformation minimized if trained facilitators who are content experts help guide the discussions of each small group. Some small group participants indicated that discussion segments ran too long and would have benefitted from a more structured approach. Knowledgeable small group facilitators can help guide participants through key discussion points while accurately resolving any subject-matter questions or errors that arise in conversation.

Given the range of responses to the array of illustrative exercises used in the pilot studies, program planners should select exercises strategically, limiting them in the curriculum to only the few most effective options for their target audience. In an expanded curriculum, instructors could also offer more anecdotal or real-world examples, as requested by some pilot participants, to make the content more accessible and applicable to the local audience.

Finally, faculty should reinforce the availability of strategies to address implicit bias and, if intervention strategies are not covered in detail in the session, provide specific information about upcoming programs, Webinars, or conference calls that will address them. Faculty should also consider providing participants with handouts of easily accessible resources on such strategies (see Lesson Learned #5). Knowing that education on viable interventions is available may attenuate feelings of helplessness regarding the inevitability of implicit bias and may encourage interested individuals to learn more while they are motivated to do so.

If a second session is not possible, planners should ensure that participants leave the program with at least a basic overview of strategies to address implicit bias, and, if possible, provide follow-up opportunities through, for example, conference calls, Web sites, and newsletter articles to learn more about and encourage the practice of various strategies.

5. **Dedicate time to discuss and practice strategies to address the influence of implicit bias.**

Because the pilot programs primarily were introductory in nature, program planners allotted the most time to explaining the concept of implicit bias and how it might influence a person's decisions and actions. Extensive time was spent on the science because program planners were not sure how receptive the audience would be to the concept of implicit bias. As a consequence, faculty spent relatively less time discussing strategies to address implicit bias. The experience across all three programs, however, demonstrated that once participants learned about the potential of implicit bias to influence their decisions and actions, they were very interested in learning how to address it.

Compared to the science on the existence of implicit bias and its potential influence on behavior, the science on ways to mitigate implicit bias is relatively young and often does not address specific applied contexts such as judicial decision making. Yet, it is important for strategies to be concrete and applicable to an individual's work to be effective; instructions to simply avoid biased outcomes or respond in an egalitarian manner are too vague to be helpful

(Dasgupta, 2009).[15] To address this gap in concrete strategies applicable to court audiences, the project team reviewed the science on strategies and identified their potential relevance for judges and court professionals. The team also conducted a small group discussion with judges and judicial educators (referred to as the Judicial Focus Group or JFG) to discuss potential strategies.

Appendix G includes four tables. The first, "Combating Implicit Bias in the Courts: Understanding Risk Factors" identifies and describes conditions that exacerbate the effects of implicit bias on decisions and actions. The risk factors include:

- the presence of certain emotional states,
- ambiguity in decision-making criteria,
- environmental cues that make the social categories associated with cultural stereotypes more salient,
- low-effort decision-making,
- distracted or pressured decision-making, and
- environments that lack appropriate feedback mechanisms and accountability.

The second table "Combating Implicit Bias in the Courts: Seeking Change" identifies and describes seven general research-based strategies that may help attenuate implicit bias or mitigate the influence of implicit bias on decisions and actions. The strategies ask people to:

- raise awareness of implicit bias (this in and of itself is insufficient to mitigate the effects of implicit bias on judgment and behavior),
- seek to identify and consciously acknowledge real group and individual differences,
- routinely check thought processes and decisions for possible bias,
- identify sources of stress and remove them from or reduce them in the decision making environment,
- identify sources of ambiguity in the decision making context and establish a structure to follow before engaging in the decision making process,
- institute feedback mechanisms; and
- increase exposure to stigmatized group members and/or counter-stereotypes and reduce exposure to stereotypes.

The table briefly summarizes empirical findings that support the strategies and offers concrete suggestions, both research-based and extrapolated from existing research, to implement each strategy. Some of the suggestions in the table focus on individual actions to minimize the influence of implicit bias, and others focus on organizational efforts to (a) eliminate situational or systemic factors that may engender implicit bias and (b) promote a more egalitarian court culture.

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[15] In addition, some seemingly intuitive strategies such as directing individuals to suppress or ignore stereotypes can actually result in more stereotypic thoughts (Macrae, Bodenhausen, Milne, & Jetten, 1994).

The third and fourth tables provide summaries of the research findings cited in the preparation of the first two tables for those interested in better understanding the basis for the risk factors and suggested strategies. The project team offers the four tables as a resource for judicial educators developing programs on implicit bias with the understanding that the information should be reviewed and revised as new research and lessons from the field expand current knowledge.

The implicit bias intervention strategies provided in Appendix G rely on an individual's self-awareness (the ability to see how one's own decisions may be biased) and self-control (the ability to regulate one's own thoughts and behavior). Some audience members may already possess these skills at a high level, whereas others may need to refine them. Judicial educators should consider whether exercises to enhance these two skills are necessary for participants to apply implicit bias intervention strategies.

6. **Develop evaluation assessment with faculty.**

Evaluating the effectiveness of the programs proved difficult for two main reasons. First, although each program covered roughly the same topics, the programs varied in the extent of time devoted to each topic. Thus some of the pre- and post-program assessment questions focused on topics that were covered in detail in a particular program, and others did not address those same topics or did so in a more cursory manner. Although the project team designed evaluation questions in consultation with program coordinators, this did not guarantee that program faculty sufficiently addressed the material that appeared on the pre- and post-tests. As a result, the project team could not determine whether poor performance on an assessment question was due to specific program content and/or delivery problems or a lack of congruence between the content of the educational program and the content of the evaluation questions. Program coordinators, faculty, and evaluators should agree on the key "takeaways" participants should have when the program is completed and develop assessment questions to address those topics. Faculty should cover the "takeaway" topics in sufficient detail such that participants could be reasonably expected to answer related assessment questions correctly.

The second evaluation issue was generating assessment items that were neither too easy nor too difficult for participants. For example, in retrospect, the correct answer to the following item was obvious: "In general, do you think that it is possible for judges' decisions and court staffs' interactions with the public to be unwittingly influenced by unconscious bias toward particular racial/ethnic groups?" Appendix H discusses the challenges of evaluating programs on implicit bias and offers examples of process, outcome, and impact measures. It also includes a discussion of why the IAT should not be used as a pre- and posttest measure of the effectiveness of a program.

References

Burgess, D., van Ryn, M., Dovidio, J., & Saha, S. (2007). Reducing racial bias among health care providers: Lessons from social-cognitive psychology. *Journal of General Internal Medicine, 22*, 882-887.

Dasgupta, N. (2009). Mechanisms underlying the malleability of implicit prejudice and stereotypes: The role of automaticity and cognitive control. In T. Nelson (Ed). *Handbook of prejudice, stereotyping, and discrimination* (pp. 267-284). New York: Psychology Press.

Devine, P. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56*, 5-18. doi: 10.1037/0022-3514.56.1.5

Gabbert, F., Memon, A., Allan, K., & Wright, D. (2004). Say it to my face: Examining the effects of socially encountered misinformation. *Legal & Criminological Psychology, 9*, 215-227. doi: 10.1348/1355325041719428

Gabbert, F., Memon, A., & Wright, D. (2006). Memory conformity: Disentangling the steps toward influence during a discussion. *Psychonomic Bulletin & Review, 13*, 480-485. doi: 10.3758/BF03193873

Greenwald, A., Poehlman, T., Uhlmann, E., & Banaji, M. (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology, 97*, 17-41. doi: 10.1037/a0015575

Juhler, J. (2008). *Evaluation and curricular materials for Exploring Frontiers: Advanced Cultural Competency Training for Judges.* Des Moines, IA: State Court Administrator's Office.

Kang, J. (2009). *Implicit bias: A primer for courts.* Williamsburg, VA: National Center for State Courts.

Kim, D. (2003) Voluntary controllability of the implicit association test (IAT). *Social Psychology Quarterly, 66*, 83-96.

Law, B. (2011). Retraining the biased brain. *Monitor on Psychology, 42*, 42.

Macrae, C., Bodenhausen, G., Milne, A., & Jetten, J. (1994). Out of mind but back in sight: Stereotypes on the rebound. *Journal of Personality and Social Psychology, 67*, 808-817.

Marsh, S. (2009). The lens of implicit bias. *Juvenile and Family Justice Today, 18*, 16-19.

Mendoza, S., Gollwitzer, P., & Amodio, D. (2010). Reducing the expression of implicit stereotypes: Reflexive control through implementation intentions. *Personality and Social Psychology Bulletin, 36*, 512-523.

Mitchell, K., & Johnson, M. (2000). Source monitoring: Attributing mental experiences. In E. Tulving & F. Craik (Eds.), *The Oxford handbook of memory* (pp. 179-195). New York: Oxford University Press.

National Center for State Courts (1999). How the public views the state courts: A 1999 national survey. Williamsburg, VA: Author. Retrieved from http://www.ncsc.org/~/media/Files/PDF/Topics/Gender%20and%20Racial%20Fairness/PublicViewCrtsPub.ashx

Nosek, B., Greenwald, A., & Banaji, M. (2007). The Implicit Association Test at age 7: A methodological and conceptual review. In J. Bargh (Ed.), *Automatic processes in social thinking and behavior* (pp. 265-292). New York: Psychology Press.

Plant, E. & Devine, P. (2001). Responses to other-imposed pro-black pressure: Acceptance or backlash? *Journal of Experimental Social Psychology, 37*, 486-501. Doi: 10.1006/jesp.2001.1478

Rachlinski, J., Johnson, S., Wistrich, A., & Guthrie, C. (2009). Does unconscious racial bias affect trial judges? *Notre Dame Law Review, 84*, 1195-1246.

Roediger, H., Meade, M., & Bergman, E. (2001). Social contagion of memory. *Psychonomic Bulletin & Review, 8,* 365-371. doi: 10.3758/BF03196174

Rottman, D. (2005). *Trust and confidence in the California courts: A survey of the public and attorneys.* San Francisco: Judicial Council of California/Administrative Office of the Courts. Retrieved from http://contentdm.ncsconline.org/cgi-in/showfile.exe?CISOROOT=/ctcomm&CISOPTR=25

Schnabel, K., Asendorpf, J. B., & Greenwald, A. G. (2008). Using implicit association tests for the assessment of implicit personality self-concept. In G. J. Boyle, G. Matthews, & H. Saklofske (Eds.), *Handbook of personality theory and assessment: Vol. 2 personality measurement and testing* (pp. 508-528). London: Sage.

Stanley, D., Sokol-Hessner, P., Banaji, M., & Phelps, E. (2011). Reply to Krueger: Good point, wrong paper. *Proceedings of the National Academy of Sciences, 108*, E411. doi: 10.1073/pnas.1107937108

Stone, J. & Moskowitz, G. (2011). Non-conscious bias in medical decision making: What can be done to reduce it? *Medical Education, 45*, 768-776. doi: 10.1111/j.1365-2923.2011.04026.x

Stroop, J. (1935). Studies of interference in serial verbal reactions. *Journal of Experimental Psychology, 18*, 643–662.

Teal, C., Shada, R., Gill, A., Thompson, B., Fruge, E., Villarreal, G., & Haidet, P. (2010). When best intentions aren't enough: Helping medical students develop strategies for managing bias about patients. *Journal of General Internal Medicine, 25*, 115-118. doi: 10.1007/s11606-009-1243-y

Vedantam, S. (2010). *The hidden brain: How our unconscious minds elect presidents, control markets, wage wars, and save our lives.* New York: Spiegel & Grau.

Zaragoza, M., Belli, R., & Payment, K. (2006). Misinformation effects and the suggestibility of eyewitness memory. In M. Garry & H. Hayne (Eds.), *Do justice and let the sky fall: Elizabeth F. Loftus and her contributions to science, law and academic freedom* (pp. 35-63). Hillsdale, NJ: Lawrence Erlbaum Associates.

Zagarosa, M., & Lane, S. (1998). Processing resources and eyewitness suggestibility. *Legal & Criminological Psychology, 3*, 305-320. doi: 10.1111/j.2044-8333.1998.tb00368.x

Web Resources Cited

California Administrative Office of the Courts, Education Division, *The Neuroscience and Psychology of Decisionmaking*:
http://www2.courtinfo.ca.gov/cjer/aoctv/dialogue/neuro/index.htm

National Center for State Courts, Interactive Database of State Programs:
http://www.ncsc.org/refprograms

National Center for State Courts, Racial Fairness Task Forces and Reports:
http://www.ncsc.org/SearchState

National Consortium on Racial and Ethnic Fairness in the Courts:
http://www.consortiumonline.net/history.html

Project Implicit: https://implicit.harvard.edu/implicit/

Appendix A
Implicit Bias Primer for Courts

NCSC
National Center for State Courts

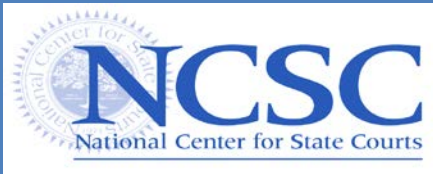Race & Ethnic Fairness in the Courts

Implicit Bias

A Primer for Courts

Jerry Kang

Prepared for the National Campaign to Ensure the Racial and Ethnic Fairness of America's State Courts

August 2009

NCSC
National Center for State Courts

Table of Contents

Implicit Bias: A Primer

Schemas and Implicit Cognitions (or "mental shortcuts")

Stop for a moment and consider what bombards your senses every day. Think about everything you see, both still and moving, with all their color, detail, and depth. Think about what you hear in the background, perhaps a song on the radio, as you decode lyrics and musical notes. Think about touch, smell, and even taste. And while all that's happening, you might be walking or driving down the street, avoiding pedestrians and cars, chewing gum, digesting your breakfast, flipping through email on your smartphone. How does your brain do all this simultaneously?

It does so by processing through schemas, which are templates of knowledge that help us organize specific examples into broader categories. When we see, for example, something with a flat seat, a back, and some legs, we recognize it as a "chair." Regardless of whether it is plush or wooden, with wheels or bolted down, we know what to do with an object that fits into the category "chair." Without spending a lot of mental energy, we simply sit. Of course, if for some reason we have to study the chair carefully--because we like the style or think it might collapse--we can and will do so. But typically, we just sit down.

We have schemas not only for objects, but also processes, such as how to order food at a restaurant. Without much explanation, we know what it means when a smiling person hands us laminated paper with detailed descriptions of food and prices. Even when we land in a foreign airport, we know how to follow the crazy mess of arrows and baggage icons toward ground transportation.

These schemas are helpful because they allow us to operate without expending valuable mental resources. In fact, unless something goes wrong, these thoughts take place automatically without our awareness or conscious direction. In this way, most cognitions are implicit.

Implicit Social Cognitions (or "thoughts about people you didn't know you had")

What is interesting is that schemas apply not only to objects (e.g., "chairs") or behaviors (e.g., "ordering food") but also to human beings (e.g., "the elderly"). We naturally assign people into various social categories divided by salient and chronically accessible traits, such as age, gender, race, and role. And just as we might have implicit cognitions that help us walk and drive, we have implicit social cognitions that guide our thinking about social categories. Where do these schemas come from? They come from our experiences with other people, some of them direct (i.e., real-world encounters) but most of them vicarious (i.e., relayed to us through stories, books, movies, media, and culture).

If we unpack these schemas further, we see that some of the underlying cognitions include stereotypes, which are simply traits that we associate with a category. For instance, if we think that a particular category of human beings is frail--such as the elderly--we will not raise our guard. If we think that another category is foreign--such as Asians--we will be surprised by their fluent English. These cognitions also include attitudes, which are overall, evaluative feelings that are positive or negative. For instance, if we identify someone as having graduated from our beloved alma mater, we will feel more at ease. The term "implicit bias"

1

includes both implicit stereotypes and implicit attitudes.

Though our shorthand schemas of people may be helpful in some situations, they also can lead to discriminatory behaviors if we are not careful. Given the critical importance of exercising fairness and equality in the court system, lawyers, judges, jurors, and staff should be particularly concerned about identifying such possibilities. Do we, for instance, associate aggressiveness with Black men, such that we see them as more likely to have started the fight than to have responded in self-defense? Or have we already internalized the lessons of Martin Luther King, Jr. and navigate life in a perfectly "colorblind" (or gender-blind, ethnicity-blind, class-blind, etc.) way?

Asking about Bias (or "it's murky in here")

One way to find out about implicit bias is simply to ask people. However, in a post-civil rights environment, it has become much less useful to ask explicit questions on sensitive topics. We run into a "willing and able" problem.

First, people may not be willing to tell pollsters and researchers what they really feel. They may be chilled by an air of political correctness.

Second, and more important, people may not know what is inside their heads. Indeed, a wealth of cognitive psychology has demonstrated that we are lousy at introspection. For example, slight environmental changes alter our judgments and behavior without our realizing. If the room smells of Lysol, people eat more neatly. People holding a warm cup of coffee (versus a cold cup) ascribe warmer (versus cooler) personality traits to a stranger described in a vignette. The

experiments go on and on. And recall that by definition, implicit biases are those that we carry without awareness or conscious direction. So how do we know whether we are being biased or fair-and-square?

Implicit measurement devices (or "don't tell me how much you weigh, just get on the scale")

In response, social and cognitive psychologists with neuroscientists have tried to develop instruments that measure stereotypes and attitudes, without having to rely on potentially untrustworthy self-reports. Some instruments have been linguistic, asking folks to write out sentences to describe a certain scene from a newspaper article. It turns out that if someone engages in stereotypical behavior, we just describe what happened. If it is counter-typical, we feel a need to explain what happened. (Von Hippel 1997; Sekaquaptewa 2003).

Others are physiological, measuring how much we sweat, how our blood pressure changes, or even which regions of our brain light up on an fMRI (functional magnetic resonance imaging) scan. (Phelps 2000).

Still other techniques borrow from marketers. For instance, conjoint analysis asks people to give an overall evaluation to slightly different product bundles (e.g., how do you compare a 17" screen laptop with 2GB memory and 3 USB ports, versus a 15" laptop with 3 GB of memory and 2 USB ports). By offering multiple rounds of choices, one can get a measure of how important each feature is to a person even if she had no clue to the question "How much would you pay for an extra USB port?" Recently, social cognitionists have adapted this methodology by creating "bundles" that include demographic attributes. For instance, how

would you rank a job with the title Assistant Manager that paid $160,000 in Miami working for Ms. Smith, as compared to another job with the title Vice President that paid $150,000 in Chicago for Mr. Jones? (Caruso 2009).

Scientists have been endlessly creative, but so far, the most widely accepted instruments have used reaction times--some variant of which has been used for over a century to study psychological phenomena. These instruments draw on the basic insight that any two concepts that are closely associated in our minds should be easier to sort together. If you hear the word "moon," and I then ask you to think of a laundry detergent, then "Tide" might come more quickly to mind. If the word "RED" is painted in the color red, we will be faster in stating its color than the case when the word "GREEN" is painted in red.

Although there are various reaction time measures, the most thoroughly tested one is the Implicit Association Test (IAT). It is a sort of video game you play, typically on a computer, where you are asked to sort categories of pictures and words. For example, in the Black-White race attitude test, you sort pictures of European American faces and African American faces, Good words and Bad words in front of a computer. It turns out that most of us respond more quickly when the European American face and Good words are assigned to the same key (and African American face and Bad words are assigned to the other key), as compared to when the European American face and Bad words are assigned to the same key (and African American face and Good words are assigned to the other key). This average time differential is the measure of implicit bias. [If the description is hard to follow, try an IAT yourself at Project Implicit.]

Pervasive implicit bias (or "it ain't no accident")

It may seem silly to measure bias by playing a sorting game (i.e. the IAT). But, a decade of research using the IAT reveals pervasive reaction time differences in every country tested, in the direction consistent with the general social hierarchies: German over Turk (in Germany), Japanese over Korean (for Japanese), White over Black, men over women (on the stereotype of "career" versus "family"), light-skinned over dark skin, youth over elderly, straight over gay, etc. These time differentials, which are taken to be a measure of implicit bias, are systematic and pervasive. They are statistically significant and not due to random chance variations in measurements.

These pervasive results do not mean that everyone has the exact same bias scores. Instead, there is wide variability among individuals. Further, the social category you belong to can influence what sorts of biases you are likely to have. For example, although most Whites (and Asians, Latinos, and American Indians) show an implicit attitude in favor of Whites over Blacks, African Americans show no such preference on average. (This means, of course, that about half of African Americans do prefer Whites, but the other half prefer Blacks.)

Interestingly, implicit biases are dissociated from explicit biases. In other words, they are related to but differ sometimes substantially from explicit biases--those stereotypes and attitudes that we expressly self-report on surveys. The best understanding is that implicit and explicit biases are related but different mental constructs. Neither kind should be viewed as the solely "accurate" or "authentic" measure of bias. Both measures tell us something important.

3

Real-world consequences (or "why should we care?")

All these scientific measures are intellectually interesting, but lawyers care most about real-world consequences. Do these measures of implicit bias predict an individual's behaviors or decisions? Do milliseconds really matter>? (Chugh 2004). If, for example, well-intentioned people committed to being "fair and square" are not influenced by these implicit biases, then who cares about silly video game results?

There is increasing evidence that implicit biases, as measured by the IAT, do predict behavior in the real world--in ways that can have real effects on real lives. Prof. John Jost (NYU, psychology) and colleagues have provided a recent literature review (in press) of ten studies that managers should not ignore. Among the findings from various laboratories are:

- implicit bias predicts the rate of callback interviews (Rooth 2007, based on implicit stereotype in Sweden that Arabs are lazy);
- implicit bias predicts awkward body language (McConnell & Leibold 2001), which could influence whether folks feel that they are being treated fairly or courteously;
- implicit bias predicts how we read the friendliness of facial expressions (Hugenberg & Bodenhausen 2003);
- implicit bias predicts more negative evaluations of ambiguous actions by an African American (Rudman & Lee 2002), which could influence decisionmaking in hard cases;
- implicit bias predicts more negative evaluations of agentic (i.e. confident, aggressive, ambitious) women in certain hiring conditions (Rudman & Glick 2001);

- implicit bias predicts the amount of shooter bias--how much easier it is to shoot African Americans compared to Whites in a videogame simulation (Glaser & Knowles 2008);
- implicit bias predicts voting behavior in Italy (Arcari 2008);
- implicit bias predicts binge-drinking (Ostafin & Palfai 2006), suicide ideation (Nock & Banaji 2007), and sexual attraction to children (Gray 2005).

With any new scientific field, there remain questions and criticisms--sometimes strident. (Arkes & Tetlock 2004; Mitchell & Tetlock 2006). And on-the-merits skepticism should be encouraged as the hallmark of good, rigorous science. But most scientists studying implicit bias find the accumulating evidence persuasive. For instance, a recent meta-analysis of 122 research reports, involving a total of14,900 subjects, revealed that in the sensitive domains of stereotyping and prejudice, implicit bias IAT scores better predict behavior than explicit self-reports. (Greenwald et al. 2009).

And again, even though much of the recent research focus is on the IAT, other instruments and experimental methods have corroborated the existence of implicit biases with real world consequences. For example, a few studies have demonstrated that criminal defendants with more Afro-centric facial features receive in certain contexts more severe criminal punishment (Banks et al. 2006; Blair 2004).

Malleability (or "is there any good news?")

The findings of real-world consequence are disturbing for all of us who sincerely believe that we do not let biases prevalent in our culture infect our individual decisionmaking. Even a little bit. Fortunately, there is evidence

4

that implicit biases are malleable and can be changed.

- An individual's motivation to be fair does matter. But we must first believe that there's a potential problem before we try to fix it.
- The environment seems to matter. Social contact across social groups seems to have a positive effect not only on explicit attitudes but also implicit ones.
- Third, environmental exposure to countertypical exemplars who function as "debiasing agents" seems to decrease our bias.
  - o In one study, a mental imagery exercise of imagining a professional business woman (versus a Caribbean vacation) decreased implicit stereotypes of women. (Blair et al. 2001).
  - o Exposure to "positive" exemplars, such as Tiger Woods and Martin Luther King in a history questionnaire, decreased implicit bias against Blacks. (Dasgupta & Greenwald 2001).
  - o Contact with female professors and deans decreased implicit bias against women for college-aged women. (Dasgupta & Asgari 2004).
- Fourth, various procedural changes can disrupt the link between implicit bias and discriminatory behavior.
  - o In a simple example, orchestras started using a blind screen in auditioning new musicians; afterwards women had much greater success. (Goldin & Rouse 2000).
  - o In another example, by committing beforehand to merit criteria (is book smarts or street smarts more important?), there was less gender

discrimination in hiring a police chief. (Uhlmann & Cohen 2005).
  - o In order to check against bias in any particular situation, we must often recognize that race, gender, sexual orientation, and other social categories may be influencing decisionmaking. This recognition is the opposite of various forms of "blindness" (e.g., color-blindness).

In outlining these findings of malleability, we do not mean to be Pollyanish. For example, mere social contact is not a panacea since psychologists have emphasized that certain conditions are important to decreasing prejudice (e.g., interaction on equal terms; repeated, non-trivial cooperation). Also, fleeting exposure to countertypical exemplars may be drowned out by repeated exposure to more typical stereotypes from the media (Kang 2005).

Even if we are skeptical, the bottom line is that there's no justification for throwing our hands up in resignation. Certainly the science doesn't require us to. Although the task is challenging, we can make real improvements in our goal toward justice and fairness.

The big picture (or "what it means to be a faithful steward of the judicial system")

It's important to keep an eye on the big picture. The focus on implicit bias does not address the existence and impact of explicit bias--the stereotypes and attitudes that folks recognize and embrace. Also, the past has an inertia that has not dissipated. Even if all explicit and implicit biases were wiped away through some magical wand, life today would still bear the burdens of an unjust yesterday. That said, as careful stewards of the justice system, we

5

should still strive to take all forms of bias
seriously, including implicit bias.

After all, Americans view the court system as
the single institution that is most unbiased,
impartial, fair, and just. Yet, a typical trial
courtroom setting mixes together many people,
often strangers, from different social
backgrounds, in intense, stressful, emotional,
and sometimes hostile contexts. In such
environments, a complex jumble of implicit and
explicit biases will inevitably be at play. It is the
primary responsibility of the judge and other
court staff to manage this complex and bias-rich
social situation to the end that fairness and
justice be done--and be seen to be done.

Glossary

Note: Many of these definitions draw from Jerry Kang & Kristin Lane, A Future History of Law and Implicit Social Cognition (unpublished manuscript 2009)

Attitude

An attitude is "an association between a given object and a given evaluative category." R.H. Fazio, et al., Attitude accessibility, attitude-behavior consistency, and the strength of the object-evaluation association, 18 J. EXPERIMENTAL SOCIAL PSYCHOLOGY 339, 341 (1982). Evaluative categories are either positive or negative, and as such, attitudes reflect what we like and dislike, favor and disfavor, approach and avoid. See also stereotype.

Behavioral realism

A school of thought within legal scholarship that calls for more accurate and realistic models of human decision-making and behavior to be incorporated into law and policy. It involves a three step process:

First, identify advances in the mind and behavioral sciences that provide a more accurate model of human cognition and behavior.

Second, compare that new model with the latent theories of human behavior and decision-making embedded within the law. These latent theories typically reflect "common sense" based on naïve psychological theories.

Third, when the new model and the latent theories are discrepant, ask lawmakers and legal institutions to account for this disparity. An accounting requires either altering the law to comport with more accurate models of thinking and behavior or providing a

transparent explanation of "the prudential, economic, political, or religious reasons for retaining a less accurate and outdated view." Kristin Lane, Jerry Kang, & Mahzarin Banaji, Implicit Social Cognition and the Law, 3 ANNU. REV. LAW SOC. SCI. 19.1-19.25 (2007)

Dissociation

Dissociation is the gap between explicit and implicit biases. Typically, implicit biases are larger, as measured in standardized units, than explicit biases. Often, our explicit biases may be close to zero even though our implicit biases are larger.

There seems to be some moderate-strength relation between explicit and implicit biases. See Wilhelm Hofmann, A Meta-Analysis on the Correlation Between the Implicit Association Test and Explicit Self-Report Measures, 31 PERSONALITY & SOC. PSYCH. BULL. 1369 (2005) (reporting mean population correlation r=0.24 after analyzing 126 correlations). Most scientists reject the idea that implicit biases are the only "true" or "authentic" measure; both explicit and implicit biases contribute to a full understanding of bias.

Explicit

Explicit means that we are aware that we have a particular thought or feeling. The term sometimes also connotes that we have an accurate understanding of the source of that thought or feeling. Finally, the term often connotes conscious endorsement of the thought or feeling. For example, if one has an explicitly positive attitude toward chocolate, then one has a positive attitude, knows that one has a positive attitude, and consciously endorses and celebrates that preference. See also implicit.

7

Implicit

Implicit means that we are either unaware of or mistaken about the source of the thought or feeling. R. Zajonc, Feeling and thinking: Preferences need no inferences, 35 AMERICAN PSYCHOLOGIST 151 (1980). If we are unaware of a thought or feeling, then we cannot report it when asked. See also explicit.

Implicit Association Test

The IAT requires participants to classify rapidly individual stimuli into one of four distinct categories using only two responses (for example, in a the traditional computerized IAT, participants might respond using only the "E" key on the left side of the keyboard, or "I" on the right side). For instance, in an age attitude IAT, there are two social categories, YOUNG and OLD, and two attitudinal categories, GOOD and BAD. YOUNG and OLD might be represented by black-and-white photographs of the faces of young and old people. GOOD and BAD could be represented by words that are easily identified as being linked to positive or negative affect, such as "joy" or "agony". A person with a negative implicit attitude toward OLD would be expected to go more quickly when OLD and BAD share one key, and YOUNG and GOOD the other, than when the pairings of good and bad are switched.

The IAT was invented by Anthony Greenwald and colleagues in the mid 1990s. Project Implicit, which allows individuals to take these tests online, is maintained by Anthony Greenwald (Washington), Mahzarin Banaji (Harvard), and Brian Nosek (Virginia).

Implicit Attitudes

"Implicit attitudes are introspectively unidentified (or inaccurately identified) traces of past experience that mediate favorable or unfavorable feeling, thought, or action toward social objects." Anthony Greenwald & Mahzarin Banaji, Implicit social cognition: attitudes, self-esteem, and stereotypes, 102 Psychol. Rev. 4, 8 (1995). Generally, we are unaware of our implicit attitudes and may not endorse them upon self-reflection. See also attitude; implicit.

Implicit Biases

A bias is a departure from some point that has been marked as "neutral." Biases in implicit stereotypes and implicit attitudes are called "implicit biases."

Implicit Stereotypes

"Implicit stereotypes are the introspectively unidentified (or inaccurately identified) traces of past experience that mediate attributions of qualities to members of a social category" Anthony Greenwald & Mahzarin Banaji, Implicit social cognition: attitudes, self-esteem, and stereotypes, 102 Psychol. Rev. 4, 8 (1995). Generally, we are unaware of our implicit stereotypes and may not endorse them upon self-reflection. See also stereotype; implicit.

Implicit Social Cognitions

Social cognitions are stereotypes and attitudes about social categories (e.g., Whites, youths, women). Implicit social cognitions are implicit stereotypes and implicit attitudes about social categories.

Stereotype

A stereotype is an association between a given object and a specific attribute. An example is "Norwegians are tall." Stereotypes may support an overall attitude. For instance, if one likes tall people and Norwegians are tall, it is likely that this attribute will contribute toward a positive orientation toward Norwegians. See also attitude.

Validities

To decide whether some new instrument and findings are valid, scientists often look for various validities, such as statistical conclusion validity, internal validity, construct validity, and predictive validity.

- Statistical conclusion validity asks whether the correlation is found between independent and dependent variables have been correctly computed.
- Internal validity examines whether in addition to correlation, there has been a demonstration of causation. In particular, could there be potential confounds that produced the correlation?
- Construct validity examines whether the concrete observables (the scores registered by some instrument) actually represent the abstract mental construct that we are interested in. As applied to the IAT, one could ask whether the test actually measures the strength of mental associations held by an individual between the social category and an attitude or stereotype
- Predictive validity examines whether some test predicts behavior, for example, in the form of evaluation, judgment, physical movement or response. If predictive validity is demonstrated in realistic settings, there is greater reason to take the measures seriously.

Bibliography

Allen R. McConnell & Jill M. Leibold, Relations Among the Implicit Association Test, Discriminatory Behavior, and Explicit Measures of Racial Attitudes, 37 J. Experimental Soc. Psychol. 435 (2001)

Anthony G. Greenwald, et al., Understanding and Using the Implicit Association Test: III. Meta-Analysis of Predictive Validity, 97 J. Personality & Soc. Psychol. 17 (2009)

Brian D. Ostafin, & Tibor P. Palfai, Compelled to Consume: The Implicit Association Test and Automatic Alcohol Motivation, 20 Psych. of Addictive Behav. 322 (2006)

Claudia Goldin & Cecilia Rouse, Orchestrating Impartiality: The Impact of "Blind" Auditions on Female Musicians, 90 Am. Econ. Rev. 715 (2000)

Dan-Olof Rooth, Implicit Discrimination in Hiring: Real World Evidence (Institute for the Study of Labor, Discussion Paper No. 2764, April 2007)

Denise Sekaquaptewa, et al., Stereotypic Explanatory Bias: Implicit Stereotyping as a Predictor of Discrimination, 39 J. Experimental Soc. Psychol.75 (2003).

Dolly Chugh, Societal and Managerial Implications of Implicit Social Cognition: Why Milliseconds Matter, 17 Soc. Just. Res. 203 (2004)

Elizabeth A. Phelps, et. al., Performance on Indirect Measures of Race Evaluation Predicts Amygdala Activation, 12 J. Cog. Neuroscience 729 (2000).

Eric Luis Uhlmann & Geoffrey L. Cohen, Constructed Criteria: Redefining Merit to Justify Discrimination, 16 Psychol. Sci. 474 (2005)

Eugene M. Caruso, Dobromir A. Rahnev, & Mahzarin Banaji, Using Conjoint Analysis to Detect Discrimination: Revealing Covert Preferences from Overt Choices, 27 Soc. Cognition 128 (2009)

Gregory Mitchell & Philip E. Tetlock, Antidiscrimination Law and the Perils of Mindreading, 67 Ohio St. L.J. 1023 (2006)

Hal R. Arkes & Philip E. Tetlock, Attributions of Implicit Prejudice, or "Would Jesse Jackson 'Fail' the Implicit Association Test?," 15 Psychol. Inquiry 257 (2004)

Irene V. Blair et al, The Influence of Afrocentric Facial Features in Criminal Sentencing, 15 Psychol. Sci. 674 (2004)

Irene V. Blair, Jennifer E. Ma, & Alison P. Lenton, Imagining Stereotypes Away: The Moderation of Implicit Stereotypes Through Mental Imagery, 81 J. Person. & Soc. Psych. 828 (2001)

Jerry Kang, Trojan Horses of Race, 118 Harv. L. Rev. 1491 (2005)

Kurt Hugenberg & Galen V. Bodenhausen, Facing Prejudice: Implicit Prejudice and the Perception of Facial Threat. 14 Psychol. Sci. 640 (2003)

Laurie A. Rudman & Matthew R. Lee, Implicit and Explicit Consequences of Exposure to Violent and Misogynous Rap Music, 5 Group Processes & Intergroup Rel. 133 (2002)

Laurie A. Rudman & Peter Glick, Prescriptive Gender Stereotypes and Backlash Toward Agentic Women, 57 J. Soc. Issues 743 (2001)

Luciano Arcuri et al., Predicting the Vote: Implicit Attitudes as Predictors of the Future Behavior of Decided and Undecided Voters, 29 Political Psychology369

Matthew K. Knock & Mahzarin R. Banaji, Prediction of Suicide Ideation and Attempts Among Adolescents Using a Brief Performance-Based Test, 75 J. Clinical & Consulting Psychology 707 (2007).

Nicola S. Gray, et al., An Implicit Test of the Associations Between Children and Sex in Pedophiles, 114 J. Abnormal Psych. 304 (2005)

Nilanjana Dasgupta & Anthony G. Greenwald, On the Malleability of Automatic Attitudes: Combating Automatic Prejudice with Images of Admired and the Disliked Individuals, 81 J. Person. & Soc. Psych.800 (2001)

Nilanjana Dasgupta & Shaki Asgari, Seeing is Believing: Exposure to Counterstereotypic Women Leaders and Its Effect on the Malleability of Automatic Gender Stereotyping, 40 J. Experimental Soc. Psychol. 642 (2004)

R. Richard Banks, Jennifer L. Eberhardt, Lee Ross, Discrimination and Implicit Racial Bias in a Racially Unequal Society. 94 Calif. Law Rev. 1169 (2006)

William Von Hippel et al., The Linguistic Intergroup Bias As an Implicit Indicator of Prejudice, 33 J. Experimental Soc. Psychol. 490 (1997)

11

Appendix B
Implicit Bias Frequently Asked Questions

IMPLICIT BIAS:
FREQUENTLY ASKED QUESTIONS

1.   WHAT IS IMPLICIT BIAS?

Unlike *explicit bias* (which reflects the attitudes or beliefs that one endorses at a conscious level), *implicit bias* is the bias in judgment and/or behavior that results from subtle cognitive processes (e.g., implicit attitudes and implicit stereotypes) that often operate at a level below conscious awareness and without intentional control. The underlying implicit attitudes and stereotypes responsible for implicit bias are those beliefs or simple associations that a person makes between an object and its evaluation that "...are automatically activated by the mere presence (actual or symbolic) of the attitude object" (**Dovidio, Gaertner, Kawakami, & Hudson, 2002**, p. 94; also **Banaji & Heiphetz, 2010**). Although automatic, implicit biases are not completely inflexible: They are malleable to some degree and manifest in ways that are responsive to the perceiver's motives and environment (**Blair, 2002**).

Implicit bias research developed from the study of attitudes. Scientists realized long ago that simply asking people to report their attitudes was a flawed approach; people may not wish or may not be able to accurately do so. This is because people are often unwilling to provide responses perceived as socially undesirable and therefore tend to report what they think their attitudes *should* be rather than what they know them to be. More complicated still, people may not even be consciously aware that they hold biased attitudes. Over the past few decades, scientists have developed new measures to identify these unconscious biases (see FAQ #3: *How is implicit bias measured?*).

2.   WHAT DO RESEARCHERS THINK ARE THE SOURCES OF IMPLICIT BIAS?

Although scientists are still working to understand implicit bias, current theory and evidence indicate that it may arise from several possible sources (as listed by **Rudman, 2004**). These interrelated sources include:

Developmental History

Implicit bias can develop over time with the accumulation of personal experience. Personal experiences include not only traditional learning experiences between the self and the target (i.e., classical conditioning; **Olson & Fazio, 2001**), but also social learning experiences (i.e., via observing parents, friends, or influential others; **Greenwald & Banaji, 1995**). For example, implicit biases in children are positively correlated with the implicit biases of their parents; however, consistent with social learning theory (**Bandura, 1997**), this congruence occurs only between children who identify with their parents and not for children who do not have a positive attachment relationship with their parents (**Sinclair, Dunn, & Lowery, 2005**). Implicit biases can develop relatively quickly through such experiences: Implicit racial bias has been found in children as young as 6 years old, and discrepancies between implicit and explicit attitudes emerge by the age of 10 (**Baron & Banaji, 2006**).

Affective Experience

Implicit bias may develop from a history of personal experiences that connect certain racial groups with fear or other negative affect. Recent developments in the field of cognitive neuroscience demonstrate a link between implicit (but not explicit) racial bias and neural activity in the amygdala, a region in the brain that scientists have associated with emotional learning and fear conditioning. Specifically, White individuals who score highly on measures of implicit racial bias also react to images of unfamiliar Black faces with stronger amygdala activation (**Phelps, O'Connor, Cunningham, Funayama, Gatenby, Gore, & Banaji, 2000**; see also **Stanley, Phelps, & Banaji, 2008**). Other researchers have demonstrated a causal relationship between the experience of certain types of emotions and the emergence of implicit bias, showing that inducing people to experience anger or disgust can create implicit bias against newly encountered outgroups (**Dasgupta, DeSteno, Williams, & Hunsinger, 2009**). Another study found that increased exposure to a socially valued Black instructor in the context of a diversity education course decreased participants' implicit bias

against Blacks, and that a reduced fear of Blacks – in addition to other affective factors – predicted this attitudinal change (**Rudman, Ashmore, & Gary, 2001**).

Culture

People share a common social understanding of the stereotypes that are pervasive in our culture, and this knowledge can foster implicit bias even if a person does not necessarily endorse the cultural stereotype (**Devine, 1989; Fazio, Jackson, Dunton, & Williams, 1995**). One explanation is that people implicitly make associations and evaluations based on cultural knowledge in a way that "may not be available to introspection and may not be wanted or endorsed but is still *attitudinal* because of its potential to influence individual perception, judgment, or action" (**Nosek, 2007**, p. 68 [emphasis added]). Another explanation offered by Nosek (2007) is that responses on implicit measures are easily influenced by cultural knowledge, but that this cultural knowledge does not reflect the respondent's actual attitude (e.g., **Karpinski & Hilton, 2001**).

The Self

People tend to possess consistent and strongly positive attitudes toward themselves, and this positive attitude about the self can transfer very easily to other things, people, and groups that share attributes with the self (for a review, see **Banaji & Heiphetz, 2010**). This transference can occur without conscious awareness; hence, such effects are termed "implicit egotism." For example, people demonstrate a biased preference for new products that resemble their own names (**Brendl, Chattopadhyay, Pelham, & Carvallo, 2005**). They appear to be disproportionately likely to live in locations that reflect their birth date (e.g., people born on February 2nd and residing in the town of Two Rivers, Wisconsin) and to choose careers or marry others with names that resemble their own (e.g., people named Dennis or Denise in dentistry, a marriage between two unrelated Smiths). They are also more attracted than usual to others who have been assigned an allegedly random experimental code number that matches their birth dates and whose alleged surnames share letters with their own surnames (**Pelham, Mirenberg, & Jones, 2002; Jones, Pelham, Carvallo, & Mirenberg, 2004**). Provocative and strange, this research illustrates the impressive automaticity of the human mind and the influence of implicit processes in our daily lives. Fundamental attitudes toward the self may underlie implicit racial bias by facilitating a general tendency to prefer one's ingroup (a group with which one identifies in some way) over outgroups (any group with which one does not affiliate; see **Greenwald, Banaji, Rudman, Farnham, Nosek, & Mellott, 2002**). As **Rudman (2004)** explains, people tend to believe that "If I am good and I am X *[X being any social group with which one identifies],* then X is also good" (p. 137; italicized text added).

3. HOW IS IMPLICIT BIAS MEASURED?

Researchers use a number of scientific methods in the measurement of implicit bias (for reviews, see **Fazio & Olson, 2003; Gawronski, 2009; Wittenbrink & Schwarz, 2007**). Although the specific procedures involved in the individual approaches differ widely, implicit measures take on one of the following three general forms:

Computerized Measures

Computerized implicit measures typically gauge the direction and strength of a person's implicit attitudes by assessing their reaction times (i.e., response latencies) when completing a specific computerized task. The exact nature of each task varies, but usually falls into one of two classes of procedures (see **Wittenbrink & Schwarz, 2007**): *sequential priming* or *response competition*.

Sequential priming procedures. Sequential priming procedures are based on a long history of evidence in the field of cognitive psychology demonstrating that when two concepts are related in memory, the presentation of one of those concepts facilitates the recall or recognition of the other (see **Neely, 1991**). In the context of racial bias, people with a negative implicit racial bias toward Blacks will more quickly and easily respond to concepts associated with the negative stereotype of Blacks than concepts that are not associated with that stereotype. One popular procedure for measuring this phenomenon is the evaluative priming task or "bona-fide pipeline" (**Fazio, Sanbonmatsu, Powell, & Kardes, 1986**).

In this task, respondents are briefly presented with a Black or White face immediately before a positive or negative target word appears on the screen. They must then identify, as quickly as possible, the meaning of the presented word as "good" or "bad." In the standard paradigm, respondents with racial bias more quickly identify negative words as "bad" and more slowly identify positive words as "good" when that word appears immediately after the presentation of a Black face (**Fazio et al., 1995**). A similar priming procedure, called the Affect Misattribution Procedure (AMP; **Payne, Cheng, Govorun, & Stewart, 2005**), briefly presents respondents with a prime of a Black or White face before viewing a neutral Chinese character they know they must evaluate as more or less visually pleasant than the average Chinese character. These researchers found that individuals' racial attitudes colored their evaluations of the characters, with White respondents reporting more favorable ratings for characters that appeared after White primes than Black primes. This effect emerged even when respondents received a forewarning about the influence of the racial primes on subsequent evaluations.

Response competition procedures. Another approach to implicit attitude measurement emerged from research on interference effects. Specifically, when a target has multiple different meanings (e.g., the word "red" written in blue font), these different meanings can imply competing responses (e.g., color identification as red or blue) in a given task that can slow down the overall performance of the respondent (note that the well-known Stroop effect is one example of interference effects at work; see **Stroop, 1935; MacLeod, 1991**). These implicit measures, called response competition procedures (**Wittenbrink & Schwarz, 2007**), takes advantage of the informational value of interference effects by presenting two competing categorization tasks in a single procedure and measuring response latencies. Thus, unlike the sequential priming procedures discussed above in which shorter response times indicate bias, *longer* response times denote implicit bias when response competition procedures are used. One of the most popular of these types of measures is the Implicit Association Test (IAT; **Greenwald, McGhee, & Schwartz, 1998**). In the IAT, respondents are asked to categorize a sequence of images (as a Black or White face) and words (as either good or bad) by pressing one of two pre-labeled buttons. For example, the respondent may be instructed to press the left button whenever they see a Black face or whenever a negative word appears, and to press the right button whenever they see a White face or a positive word. Alternatively, they may be informed to press one button when they see a Black face or positive word, and the other button for a White face or negative word. Because of interference effects, individuals who associate "Black" with "bad," for example, will respond much more slowly when "Black" and "good" share the same response button. Related measures include the Go/No-Go Association Task (GNAT; see **Nosek & Banaji, 2001**) and the Extrinsic Affective Simon Task (EAST; see **De Houwer, 2003**).

Paper & Pencil Measures

Several paper & pencil measures of implicit attitudes exist (see **Vargas, Sekaquaptewa, & von Hippel, 2007** for a review). Some of these measures are simply adaptations of existing computerized assessments. Although researchers have primarily focused on developing manual adaptations of the IAT (e.g., **Kitayama & Uchida, 2003; Lemm, Sattler, Khan, Mitchell, & Dahl, 2002**), Vargas and colleagues (2007) suggest that the AMP (see description under "Computerized Measures," above) may be more easily adapted to a paper & pencil format because the procedure does not involve measurement of response time.

Other paper & pencil implicit measures assess memory accessibility. One example is the Word Fragment Completion (WFC) task, in which people are presented with fragments of words (e.g., POLI_E) and are asked to fill in the missing letters. These word fragments, however, can be completed in stereotypic or non-stereotypic ways (e.g., POLITE, POLICE; **Gilbert & Hixon, 1991**). The number of stereotypic word completions in the WFC task has been used as an implicit measure of racial prejudice (e.g., **Son Hing, Li, & Zanna, 2002**).

Finally, two other implicit bias measurement approaches assess attributional processing styles. One such example is the Stereotypic Explanatory Bias (SEB; **Sekaquaptewa, Espinoza, Thompson, Vargas, & von Hippel, 2003**), which is the tendency to ascribe the stereotype-consistent behavior of minorities to factors intrinsic to the individual (e.g., trait or dispositional attributions like hard work or talent), but stereotype-inconsistent behavior to extrinsic, situational factors (e.g., the weather, luck). Similarly, the Linguistic Intergroup Bias (LIB; **Maass, Salvi, Arcuri, & Semin, 1989**) is the tendency to describe stereotypic behavior using abstract language (e.g., by ascribing the behavior to a global trait) but

non-stereotypic behavior using concrete language (e.g., by describing the behavior as a specific event). By carefully examining the respondent's choice of language or agreement with particular summaries of a behavioral event, researchers have used these tendencies as indicators of implicit prejudice (see **von Hippel, Sekaquaptewa, & Vargas, 1997** and **Sekaquaptewa et al. 2003**).

Physiological Measures

Psychologists have long expressed interest in determining the physiological correlates of psychological phenomena. Those interested in the study of intergroup attitudes have examined autonomic nervous system responses such as the amount of sweat produced (e.g., **Rankin & Campbell, 1955**), heart rate (e.g., **Shields & Harriman, 1984**), and even small facial muscle movements that are nearly imperceptible to the untrained human eye (e.g., **Vanman, Saltz, Nathan, & Warren, 2004; Mahaffey, Bryan, & Hutchison, 2005**). More recently, neuroscientists have attempted to understand the neural underpinnings of implicit bias (e.g., **Stanley, Phelps, & Banaji, 2008; Cunningham, Johnson, Gatenby, Gore, & Banaji, 2003**). With further technological advances in physiological measurement, researchers will gain greater insight into the connection between psychological and physiological phenomena that could make some physiological techniques invaluable in the measurement and study of implicit bias. Given the current state of the science, however, the following common techniques are appropriate for advancing scientific understanding of implicit bias, but not for the detection of implicit bias (i.e., "diagnosing" implicit bias in an individual).

Common physiological measures used in the study of attitudes (as described more thoroughly in reviews by **Banaji & Heiphetz, 2010**; **Blascovich & Mendes, 2010**; and **Ito & Cacioppo, 2007**) include:

EDA. The measurement of sweat production is interchangeably referred to as skin conductance response (SCR), galvanic skin response (GSR), and electrodermal activity (EDA). When an individual experiences greater arousal in response to a stimulus, the eccrine glands in the skin (particularly in the hands and feet) excrete more sweat (**Banaji & Heiphetz, 2010,** p. 363). However, sweat production as a response and, therefore, EDA as a measurement tool do not discriminate between positive and negative responses to a stimulus. That is, by itself, EDA provides no information about the valence of the individual's response, but simply detects arousal. For example, as Banaji & Heiphetz (2010) explain, greater EDA in the presence of Black individuals but not White individuals (**Rankin & Campbell, 1955**) indicates only that the respondent reacts more strongly to the Black individual, and not that the reaction is necessarily a negative one.

Cardiovascular responses. Although a number of techniques have been used to measure cardiac and vasomotor responses, the most common measurement is that of heart rate. Like EDA, heart rate is a valence-insensitive measure of autonomic nervous system arousal and therefore cannot be used to distinguish between positive and negative reactions to a stimulus.

EMG. Facial electromyography (EMG) is the measurement of electrical activity associated with facial muscle contractions. With this technique, researchers can detect the presence of muscle movements and measure the amplitude of the response. Unlike some of the earlier measures discussed, however, the facial EMG can be used to assess response valence because different facial muscles are associated with positive and negative reactions. One study found that greater cheek EMG activity towards Whites than Blacks predicted racial bias in participant selection decisions when evaluating candidates for a teaching fellowship (**Vanman, Saltz, Nathan, & Warren, 2004**). Unlike the IAT, the facial EMG remained unaffected by participants' motivation to control for prejudiced responses, indicating its potential value as a measure of implicit attitudes.

Another physiological measure, the _startle eyeblink response_, relies on similar response mechanisms; however, only highly arousing stimuli evoke a startle response, limiting the utility of this measurement approach.

fMRI. Functional magnetic resonance imaging (fMRI) is a relatively new technique that measures blood flow in the brain. Because increased blood flow in any specific region of the brain signals increased activity in that region, blood flow can be used as a proxy measure for neural activity. In a groundbreaking study, **Phelps, O'Connor, Cunningham,**

Funayama, Gatenby, Gore, and Banaji (2000) demonstrated a correlation between the degree of activation in the amygdala region of the brain, as measured by fMRI, and scores on the IAT; moreover, people exhibit greater amygdala activation when processing negative, rather than positive, stimuli (**Cunningham, Johnson, Gatenby, Gore, & Banaji, 2003**). Although other brain areas are involved in social cognitive processes like implicit bias, the amygdala has been extensively studied because it is so important to evaluation and preference development (**Banaji & Heiphetz, 2010**).

ERP. Event-related brain potentials (ERPs) are measurable electrical signals emitted by brain activity (i.e., neural firing) and provide information on the strength and valence of a person's response to a stimulus. Because this technique measures real-time changes (within milliseconds) in neural activity, researchers can correlate individual ERP data with specific temporal events (e.g., changes in brain activity from a baseline measurement after exposure to a photo of a Black man). Several specific components of ERPs (e.g., larger late-positive potentials or LPPs; **Ito, Thompson, & Cacioppo, 2004**) provide information about an individual's responses to others that are related to implicit bias (for more information, see **Ito & Cacioppo, 2007**, pp. 134-138).

4. DOES IMPLICIT BIAS MATTER MUCH IN THE REAL WORLD?

A recent meta-analysis of 122 research reports found that one implicit measure (the IAT) effectively predicted bias in a range of relevant social behaviors, social judgments, and even physiological responses (r = .274; **Greenwald, Poehlman, Uhlmann, & Banaji, 2009**). Implicit bias can influence a number of professional judgments and actions in the "real world" (see **Jost, Rudman, Blair, Carney, Dasgupta, Glaser & Hardin, 2009**) that may have legal ramifications.

Some particularly relevant examples are:

Police Officers: The Decision to Shoot

Police officers face high-pressure, high-risk decisions in the line of fire. One seminal research report reveals that these rapid decisions are not immune to the effects of implicit biases. Specifically, college participants in this study played a computer game in which they needed to shoot dangerous armed characters as quickly as possible (by pressing a "shoot" button), but decide not to shoot unarmed characters (by pressing a "don't shoot" button). Some of the characters held a gun, like a revolver or pistol, and some of the characters held innocuous objects, like a wallet or cell phone. In addition, half of the characters were White, and half were Black. Study participants more quickly chose to shoot armed Black characters than armed White characters and more quickly chose not to shoot unarmed White characters than unarmed Black characters. They also committed more "false alarm" errors, electing to shoot unarmed Black characters more than unarmed White characters and electing not to shoot armed White characters more than armed Black characters (**Correll, Park, Judd, & Wittenbrink, 2002**). This research was inspired by the 1999 New York City shooting of Guinean immigrant Amadou Diallo: Police officers fired 41 rounds and killed Diallo as he pulled out a wallet. Other studies produced similar results with police officers and community members, and also showed that training and practice can help to reduce this bias (e.g., **Correll, Park, Judd, Wittenbrink, Sadler, & Keesee, 2007; Plant & Peruche, 2005; Plant, Peruche, & Butz, 2005**).

Physicians: Treatment Decisions

Physicians routinely make crucial decisions about medical care for patients whose lives hang in the balance. In the face of such high stakes, it may be surprising to think that automatic associations can unknowingly bias professional decision-making. One study showed that the implicit racial biases of ER physicians predicted fewer thrombolysis treatment recommendations when the patient was described as Black as opposed to White (**Green, Carney, Pallin, Ngo, Raymond, Iezzoni, & Banaji, 2007**). The implicit racial biases of White physicians also seem to play a role in predicting how positively or negatively Black patients respond to the medical interaction (**Penner, Dovidio, West, Gaertner, Albrecht, Daily, & Markova, 2010**), which might lead to a greater incidence of malpractice lawsuits (cf. **Stelfox, Gandhi, Orav, & Gustafson, 2005**).

Managers: Hiring Decisions

When screening a pool of job candidates, hiring managers must review hundreds if not thousands of resumes of qualified applicants. Studies show that interview and selection decisions reflect bias against minorities (e.g., **Dovidio & Gaertner, 2000; Bertrand & Mullainathan, 2004; Ziegert & Hanges, 2005**). In one such study, hiring managers were three times less likely to call highly qualified Arab job candidates in for an interview compared to equally qualified candidates of the racial majority. Interestingly, the implicit racial bias scores of hiring managers predicted their likelihood of offering callbacks to the Arab job applicants (**Rooth, 2010**).

Judges and Jurors: Capital Punishment and Sentencing

If implicit biases can affect both the intuitive, split-second decisions of police officers and sway the more deliberate decisions of physicians and hiring managers, it stands to reason that judges and jurors may exhibit similar tendencies. Indeed, one archival study of 600 death-eligible cases in Philadelphia appears to support this possibility. Researchers identified all cases (n=44) in which a Black male defendant was convicted of murdering a White victim and presented a photograph of each defendant to participants, who in turn rated each defendant on how "stereotypically Black" he appeared to be. Stereotypicality of appearance predicted death penalty sentencing outcomes: 57.5% of those judged as more stereotypically Black were sentenced to death, compared to 24.4% of those who were perceived as less stereotypically Black (**Eberhardt, Davies, Purdie-Vaughns, & Johnson, 2006**). Eberhardt and colleagues explain this effect in the context of other empirical research (**Eberhardt, Goff, Purdie, & Davies, 2004**) that demonstrates a tendency to implicitly associate Black Americans with crime. Other studies further illustrate racial biases in the context of detain-release decisions, verdicts, and sentencing (e.g., **Gazal-Ayal & Sulitzeanu-Kenan, 2010; Sommers & Ellsworth, 2001**).

Voters and Other Decision-Makers

Other research also shows that implicit racial biases can predict voting intentions and behavior. In one study of 1,057 registered voters, pro-White implicit bias scores predicted reported intent to vote for McCain over Obama a week before the 2008 U.S. Presidential election (**Greenwald, Smith, Sriram, Bar-Anan, & Nosek, 2009**). Another study found that, after controlling for explicit prejudice, voters who were more implicitly prejudiced against Blacks were less likely to vote for Obama and more likely to abstain from the vote or vote for third party candidates (**Payne, Krosnick, Pasek, Lelkes, Akhtar, & Tompson, 2010**). Implicit biases may, in particular, help "tip the scales" for undecided decision-makers (e.g., **Galdi, Arcuri, & Gawronski, 2008**).

5. WHAT ARE THE KEY CRITICISMS OF IMPLICIT BIAS RESEARCH?

The mounting research evidence on the phenomenon of implicit bias may lead to two disconcerting conclusions: (1) People know less about their own mental processes than common sense would suggest, and (2) overt racism may be diminishing, but subtler forms of racism persist. As is often the case with provocative science, this program of research has its proponents and its skeptics. Scholarly debate revolves primarily around the definition and appropriate measurement of implicit bias, and some have questioned the existence of implicit bias as an attitudinal phenomenon.

Some individuals stridently resist the idea of implicit racial prejudice and are vocal about their opposition (e.g., **Mitchell & Tetlock, 2006; Wax & Tetlock, 2005**). These individuals argue that they are "under no obligation to agree when a segment of the psychological research community labels the vast majority of the American population unconsciously prejudiced on the basis of millisecond reaction-time differentials on computerized tests. It is our view that the legal community should require evidence that scores on these tests of unconscious prejudice map in replicable functional forms onto tendencies to discriminate in realistic settings…" and that, because of this and because the IAT is informed by a variety of factors that "cannot plausibly be labeled precursors to discrimination," the IAT does not tap into "100% pure prejudice" (**Mitchell & Tetlock, 2009**).

In response to these criticisms, the proponents of implicit bias argue that the large body of research over several decades and hundreds of neuroscientific, cognitive, and social psychological studies has produced sufficient if not overwhelming evidence to support the existence of the kinds of automatic negative associations referred to as "implicit

bias" (for a review and one of many direct responses to the opposing allegations of Tetlock and colleagues, see **Jost et al., 2009**). An exponentially increasing number of empirical studies demonstrate a relationship between measures of implicit bias and real-world discriminatory behavior (see FAQ #4: *Does Implicit Bias Matter Much in the Real World?*, above). Moreover, attitudes are flexible constructs – not rigid ones – and one's expressed attitude at any given moment is responsive to a variety of relevant and seemingly irrelevant factors. For example, one now-classic study showed that people's judgments of even their own life satisfaction could be influenced by incidental factors such as the weather (i.e., sunny or cloudy) on the day they were surveyed (**Schwarz & Clore, 1983**). Similarly, the expression of implicit bias is sensitive to a range of sometimes subtle moderating factors (e.g., see **Blair, 2002**).

A key component of the implicit bias controversy is the concern that the IAT, specifically, is problematic. Some believe that proponents of the IAT overstate the consequentiality of their research findings (e.g., **Blanton & Jaccard, 2008; Blanton & Jaccard, 2006**), and others argue that although evaluative priming measures may be construed as "automatic evaluations," what exactly the IAT technique measures is debatable (**Fazio & Olson, 2003**). Indeed, the IAT and a popular evaluative priming implicit measure, the *bona-fide pipeline*, fail to show correspondence with one another even though both are supported by empirical evidence demonstrating correspondence with actual behavior (**Olson & Fazio, 2003**). These researchers and others (e.g., **Karpinski & Hilton, 2001**) argue that the IAT measures not attitudes but extrapersonal associations acquired through the environment, whether those associations are personally endorsed at an attitudinal level or not. In response to this assertion, **Nosek (2007)** argues that regardless of whether these implicit processes are labeled as attitudes or as associations, the effect is still the same: These automatic processes are capable of guiding our thoughts and actions in predictable – and biased – ways.

Opponents of the IAT have gone on to propose a number of alternative explanations to discount the IAT as a measure of implicit bias, although variation in the interpretation of how the phenomenon is defined may be partly responsible for this scholarly discord. Proponents of the IAT have thus far presented evidence discrediting several, but not all, of these alternative explanations (e.g., **Dasgupta, Greenwald, & Banaji, 2003; Nosek, Greenwald, & Banaji, 2005; Greenwald, Nosek, & Banaji, 2003**; see Dr. Anthony Greenwald's IAT Page for a complete listing of relevant research). These disparate views will likely be resolved as the science advances and new methods for the measurement of implicit bias are developed.

6. WHAT CAN PEOPLE DO TO MITIGATE THE EFFECTS OF IMPLICIT BIAS ON JUDGMENT AND BEHAVIOR?

Once people are made aware of their own implicit biases, they can begin to consider ways in which to address them. Scientists have uncovered several promising implicit bias intervention strategies that may help individuals who strive to be egalitarian:

- Consciously acknowledge group and individual differences (i.e., adopt a multiculturalism approach to egalitarianism rather than a color-blindness strategy in which one tries to ignore these differences)
- Routinely check thought processes and decisions for possible bias (i.e., adopt a thoughtful, deliberative, and self-aware process for inspecting how one's decisions were made)
- Identify sources of stress and reduce them in the decision-making environment
- Identify sources of ambiguity and impose greater structure in the decision-making context
- Institute feedback mechanisms
- Increase exposure to stereotyped group members (e.g., seek out greater contact with the stigmatized group in a positive context)

For more detailed information on promising intervention strategies, see Appendix G in Casey et al. (2012).

7. CAN PEOPLE ELIMINATE OR CHANGE AN IMPLICIT BIAS?

There is a difference between reducing the influence of implicit bias on decisions (see FAQ #6: *What can people do to mitigate the effects of implicit bias on judgment and behavior?*) and reducing implicit bias itself. Although implicit bias

is malleable, many "debiasing" strategies seem to only temporarily reduce or shift it. Longer-term change might be possible only through substantial and persistent effort (for a discussion about the conditional limitations of some existing strategies for reducing implicit bias, see **Joy-Gaba & Nosek, 2010**).

If applied long-term, people may be able to reduce or eliminate implicit bias by modifying their underlying implicit attitudes. Generally, increased contact with or exposure to a stigmatized social group in a positive context may reduce prejudice toward that group over time (e.g., **Binder, Zagefka, Brown, Funke, Kessler, Mummendey et al., 2009**) and may even reduce prejudice toward other out-groups in general (**Tausch, Hewstone, Kenworthy, Psaltis, Schmid, Popan et al., 2010**). Reductions in implicit bias, specifically, have occurred as a result of longer-term exposure to minorities in socially valued roles (**Dasgupta & Rivera, 2008; Dasgupta & Asgari, 2004**), in the context of diversity education (**Rudman, Ashmore, & Gary, 2001**), and even as a result of simply imagining (rather than actually encountering) counter-stereotypes (**Blair, Ma, & Lenton, 2001**). In addition, some research indicates that people who have developed chronic egalitarian goals may be able to beat implicit bias at its own game by automatically inhibiting implicit stereotypes (e.g., **Moskowitz & Li, 2011; Moskowitz, Salomon, & Taylor, 2000**).

IMPLICIT BIAS: FREQUENTLY ASKED QUESTIONS
REFERENCES

Banaji, M., & Heiphetz, L. (2010). Attitudes. In S. Fiske, D. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology, 5th edition* (pp. 348-388). New York: Wiley.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: W.H. Freeman.

Baron, A., & Banaji, M. (2006). The development of implicit attitudes: Evidence of race evaluations from ages 6 and 10 and adulthood. *Psychological Science, 17*, 53-58.

Bertrand, M., & Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Economic Review, 94*, 991-1013.

Binder, J., Zagefka, H., Brown, R., Funke, F., Kessler, T., Mummendey, A., et al. (2009). Does contact reduce prejudice or does prejudice reduce contact? A longitudinal test of the contact hypothesis among majority and minority groups in three European countries. *Journal of Personality and Social Psychology, 96, 843*-856.

Blair, I. (2002). The malleability of automatic stereotypes and prejudice. *Personality and Social Psychology Review, 6*, 242-261.

Blair, I., Ma, J., & Lenton, A. (2001). Imagining stereotypes away: The moderation of implicit stereotypes through mental imagery. *Journal of Personality and Social Psychology, 81*, 828-841.

Blanton, H., & Jaccard, J. (2006). Arbitrary metrics in psychology. *American Psychologist, 61*, 27-41.

Blanton, H., & Jaccard, J. (2008). Unconscious racism: A concept in pursuit of a measure. *Annual Review of Sociology, 34*, 277-297.

Blascovich, J., & Mendes, W. (2010). Social psychophysiology and embodiment. In S. Fiske, D. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology, 5th edition*. New York: Wiley.

Brendl, C., Chattopadhyay, A., Pelham, B., & Carvallo, M. (2005). Name letter branding: Valence transfers when product specific needs are active. *Journal of Consumer Research, 32*, 405-415.

Casey, P., Warren, R., Cheesman, F., & Elek, J. (2012). *Helping courts address implicit bias: Resources for education.* Williamsburg, VA: National Center for State Courts.

Correll, J., Park, B., Judd, C., & Wittenbrink, B. (2002). The police officer's dilemma: Using ethnicity to disambiguate potentially threatening individuals. *Journal of Personality and Social Psychology, 83*, 1314-1329.

Correll, J., Park, B., Judd, C., Wittenbrink, B., Sadler, M., & Keesee, T. (2007). Across the thin blue line: Police officers and racial bias in the decision to shoot. *Journal of Personality and Social Psychology, 92*, 6, 1006-1023. doi: 10.1037/0022-3514.92.6.1006

Cunningham, W., Johnson, M., Gatenby, J., Gore, J., & Banaji, M. (2003). Neural components of social evaluation. *Journal of Personality and Social Psychology, 85*, 639-649.

Dasgupta, N., & Asgari, S. (2004). Seeing is believing: Exposure to counterstereotypic women leaders and its effect on the malleability of automatic gender stereotyping. *Journal of Experimental Social Psychology, 40*, 642-658.

Dasgupta, N., DeSteno, D., Williams, L., & Hunsinger, M. (2009). Fanning the flames of prejudice: The influence of specific incidental emotions on implicit prejudice. *Emotion, 9*, 585-591.

Dasgupta, N., Greenwald, A., & Banaji, M. (2003). The first ontological challenge to the IAT: Attitude or mere familiarity? *Psychological Inquiry, 14*, 238-243.

Dasgupta, N., & Rivera, L. (2008). When social context matters: The influence of long-term contact and short-term exposure to admired outgroup members on implicit attitudes and behavioral intentions. *Social Cognition, 26,* 112-123.

De Houwer, J. (2003). The Extrinsic Affective Simon Task. *Experimental Psychology, 50*, 77-85.

Devine, P. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56*, 680-690.

Dovidio, J., & Gaertner, S. (2000). Aversive racism and selection decisions: 1989 and 1999. *Psychological Science, 11*, 315-319.

Dovidio, J., Gaertner, S., Kawakami, K., & Hodson, G. (2002). Why can't we just get along? Interpersonal biases and interracial distrust. *Cultural Diversity and Ethnic Minority Psychology, 8,* 88-102.

Eberhardt, J., Davies, P., Purdie-Vaughns, V. & Johnson, S. (2006). Looking deathworthy: Perceived stereotypicality of Black defendants predicts capital-sentencing outcomes. *Psychological Science, 17*, 383-386.

Eberhardt, J., Goff, P., Purdie, V., & Davies, P. (2004). Seeing Black: Race, crime, and visual processing. *Journal of Personality and Social Psychology, 87*, 876-893.

Fazio, R., Jackson, J., Dunton, B., & Williams, C. (1995). Variability in automatic activation as an unobtrusive measure of racial attitudes: A bona fide pipeline? *Journal of Personality and Social Psychology, 69*, 1013-1027.

Fazio, R., & Olson, M. (2003). Implicit measures in social cognition research: Their meaning and use. *Annual Review of Psychology, 54*, 297-327.

Fazio, R., Sanbonmatsu, D., Powell, M., & Kardes, F (1986). On the automatic activation of attitudes. *Journal of Personality and Social Psychology, 50*, 229-238.

Galdi, S., Arcuri, L., & Gawronski, B. (2008). Automatic mental associations predict future choices of undecided decision-makers. *Science, 321*, 1100-1102.

Gawronski, B. (2009). Ten frequently asked questions about implicit measures and their frequently supposed, but not entirely correct answers. *Canadian Psychology, 50,* 141-150.

Gazal-Ayal, O., & Sulitzeanu-Kenan, R. (2010). Let my people go: Ethnic in-group bias in judicial decisions - Evidence from a randomized natural experiment. *Journal of Empirical Legal Studies, 7*, 403-428.

Gilbert, D., & Hixon, J. (1991). The trouble of thinking: Activation and application of stereotypic beliefs. *Journal of Personality and Social Psychology, 60*, 509-517.

Green, A., Carney, D., Pallin, D., Ngo, L., Raymond, K., Iezzoni, L., & Banaji, M. (2007). The presence of implicit bias in physicians and its prediction of thrombolysis decisions for Black and White patients. *Journal of General Internal Medicine, 22*, 1231-1238.

Greenwald, A., & Banaji, M. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review, 102*, 4-27.

Greenwald, A., Banaji, M., Rudman, L., Farnham, S. Nosek, B., & Mellot, D. (2002). A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept. *Psychological Review, 109*, 3-25.

Greenwald, A., McGhee, D., & Schwartz, J. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology, 74*, 1464-1480.

Greenwald, A., Nosek, B., & Banaji, M. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology, 85*, 197-216.

Greenwald, A., Poehlman, T., Uhlmann, E., & Banaji, M. (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology, 97*, 17-41.

Greenwald, A., Smith, C., Sriram, N., Bar-Anan, Y., Nosek, B. (2009). Implicit race attitudes predicted vote in the 2008 U.S. presidential election. *Analyses of Social Issues and Public Policy, 9*, 241-253.

Ito, T., & Cacioppo, J. (2007). Attitudes as mental and neural states of readiness. In B. Wittenbrink and N. Schwarz (Eds.), *Implicit measures of attitudes* (pp. 125-158). New York: Guilford.

Ito, T., Thompson, E., & Cacioppo, J. (2004). Tracking the timecourse of social perception: The effects of racial cues on event-related brain potentials. *Personality and Social Psychology Bulletin, 30*, 1267-1280.

Jones, J., Pelham, B., Carvallo, M., & Mirenberg, M. (2004). How do I love thee? Let me count the Js: Implicit egotism and interpersonal attraction. *Journal of Personality and Social Psychology, 87*, 665-683.

Jost, J., Rudman, L., Blair, I., Carney, D., Dasgupta, N., Glaser, J., et al. (2009). The existence of implicit bias is beyond reasonable doubt: A refutation of ideological and methodological objections and executive summary of ten studies that no manager should ignore. *Research in Organizational Behavior, 29,* 39-69.

Joy-Gaba, J., & Nosek, B. (2010). The surprisingly limited malleability of implicit racial evaluations. *Social Psychology, 41*, 137-146.

Karpinski, A., & Hilton, J. (2001). Attitudes and the Implicit Association Test. *Journal of Personality and Social Psychology, 81*, 774-788.

Kitayama, S., & Uchida, Y. (2003). Explicit self-criticism and implicit self-regard: Evaluating self and friend in two cultures. *Journal of Experimental Social Psychology, 39*, 476-482.

Lemm, K., Sattler, D., Khan, S., Mitchell, R., & Dahl, J. (2002). *Reliability and validity of a paper-based implicit association test*. Paper presented at the fourth annual convention of the Society for Personality and Social Psychology, Savannah, GA.

Maass, A., Salvi, D., Arcuri, L., & Semin, G. (1989). Language use in intergroup contexts: The linguistic intergroup bias. *Journal of Personality and Social Psychology, 57*, 981-993.

MacLeod, C. (1991). Half a century of research on the Stroop effect: An integrative review. *Psychological Bulletin, 109*,163–203.

Mahaffey, A., Bryan, A., & Hutchison, K. (2005). Using startle eye blink to measure the affective component of antigay bias. *Basic and Applied Social Psychology, 35*, 537-545.

Mitchell, G., & Tetlock, P. (2006). Antidiscrimination law and the perils of mindreading. *Ohio State Law Journal, 67*, 1023-1122.

Mitchell, G., & Tetlock, P. (2009). Facts do matter: A reply to Bagenstos. *Hofstra Law Review, 37*, 737-762.

Moskowitz, G., & Li, P. (2011). Egalitarian goals trigger stereotype inhibition: A proactive form of stereotype control. *Journal of Experimental Social Psychology, 47*, 103-116.

Moskowitz, G., Salomon, A., & Taylor, C. (2000). Preconsciously controlling stereotyping: Implicitly activated egalitarian goals prevent the activation of stereotypes. *Social Cognition, 18*, 151-177.

Neely, J. H. (1991). Semantic priming effects in visual word recognition: A selective review of current findings and theories. In D. Besner, & G. W. Humphreys (Eds.), *Basic processes in reading* (pp. 264–336).Hillsdale, NJ: Lawrence Erlbaum Associates.

Nosek, B. (2007). Implicit-explicit relations. *Current Directions in Psychological Science, 16*, 65-69.

Nosek, B., & Banaji, M. (2001). The Go/No-go Association Task. *Social Cognition, 19*, 626-666.

Nosek, B., Greenwald, A., & Banaji, M. (2005). Understanding and using the Implicit Association Test: II. Method variables and construct validity. *Personality and Social Psychology Bulletin, 31*, 166-180.

Olson, M., & Fazio, R. (2001). Implicit attitude formation through classical conditioning. *Psychological Science, 12*, 413-417.

Olson, M., & Fazio, R. (2003). Relations between implicit measures of prejudice: What are we measuring? *Psychological Science, 14*, 636-639.

Payne, K., Cheng, C., Govorun, O., & Stewart, B. (2005). An inkblot for attitudes: Affect misattribution as implicit measurement. *Journal of Personality and Social Psychology, 89*, 277-293.

Payne, K., Krosnick, J., Pasek, J., Leikes, Y., Ahktar, O., & Thompson, T. (2010). Implicit and explicit prejudice in the 2008 American presidential election. *Journal of Experimental Psychology, 46*, 367-374.

Pelham, B., Mirenberg, M., & Jones, J. (2002). Why Susie sells seashells by the seashore: Implicit egotism and major life decisions. *Journal of Personality and Social Psychology, 82*, 469-487.

Penner, L., Dovidio, J., West, T., Gaertner, S., Albrecht, T., Dailey, R., & Markova, T. (2010). Aversive racism and medical interactions with Black patients: A field study. *Journal of Experimental Social Psychology, 46*, 436-440.

Phelps, E., O'Connor, K., Cunningham, W., Funayama, E., Gatenby, J., Gore, J., & Banaji, M. (2000). Performance on indirect measures of race evaluation predicts amygdale activation. *Journal of Cognitive Neuroscience, 12*, 729-738.

Plant, E., & Peruche, B. (2005). The consequences of race for police officers' responses to criminal suspects. *Psychological Science, 16*, 180-183.

Plant, E., Peruche, B., & Butz, D. (2005). Eliminating automatic racial bias: Making race non-diagnostic for responses to criminal suspects. *Journal of Experimental Social Psychology, 41*, 141-156.

Rankin, R., & Campbell, D. (1955). Galvanic skin response to Negro and White experimenters. *Journal of Abnormal and Social Psychology, 51*, 30-33.

Rooth, D. (2010). Automatic associations and discrimination in hiring: Real world evidence. *Labour Economics, 17*, 523-534.

Rudman, L. (2004). Social justice in our minds, homes, and society: The nature, causes, and consequences of implicit bias. *Social Justice Research, 17*, 129-142.

Rudman, L., Ashmore, R., & Gary, M. (2001). "Unlearning" automatic biases: The malleability of implicit prejudice and stereotypes. *Journal of Personality and Social Psychology, 81*, 856-868.

Schwarz, N., & Clore, G. (1983). Mood, misattribution, and judgments of well-being: Informative and directive functions of affective states. *Journal of Personality and Social Psychology, 45*, 513-523.

Sekaquaptewa, D., Espinoza, P., Thompson, M., Vargas, P., & von Hippel, W. (2003). Stereotypic explanatory bias: Implicit stereotyping as a predictor of discrimination. *Journal of Experimental Social Psychology, 39*, 75-82.

Shields, S., & Harriman, R. (1984). Fear of male homosexuality: Cardiac responses of low and high homonegative males. *Journal of Homosexuality, 10*, 53-67.

Sinclair, S., Dunn, E., & Lowery, B. (2005). The relationship between parental racial attitudes and children's implicit prejudice. *Journal of Experimental Social Psychology, 41*, 283-289.

Sommers, S., & Ellsworth, P. (2001). White juror bias: An investigation of prejudice against Black defendants in the American courtroom. *Psychology, Public Policy, and Law, 7,* 201-229.

Son Hing, L., Li, W., & Zanna, M. (2002). Inducing hypocrisy to reduce prejudicial responses among aversive racists. *Journal of Experimental Social Psychology, 38*, 71-78.

Stanley, D., Phelps, E., & Banaji, M. (2008). The neural basis of implicit attitudes. *Current Directions in Psychological Science, 17*, 164-170.

Stelfox, H., Gandhi, T., Orav, E., & Gustafson, M. (2005). The relation of patient satisfaction with complaints against physicians and malpractice lawsuits. *American Journal of Medicine, 118*, 1126-1133.

Stroop, J. (1935). Studies of interference in serial verbal reactions. *Journal of Experimental Psychology, 18*, 643–662.

Tausch, N., Hewstone, M., Kenworthy, J., Psaltis, C., Schmid, K., Popan, J., et al. (2010). Secondary transfer effects of intergroup contact: Alternative accounts and underlying processes. *Journal of Personality and Social Psychology, 99*, 282-302.

Vanman, E., Saltz, J., Nathan, L., & Warren, J. (2004). Racial discrimination by low-prejudiced Whites: Facial movements as implicit measures of attitudes related to behavior. *Psychological Science, 15*, 711-714.

Vargas, P., Sekaquaptewa, D., & von Hippel, W. (2007). Armed only with paper and pencil: "Low-tech" measures of implicit bias. In B. Wittenbrink and N. Schwarz (Eds.), *Implicit measures of attitudes*, pp. 103-124. New York: Guilford.

von Hippel, W., Sekaquaptewa, D., & Vargas, P. (1997). The linguistic intergroup bias as an implicit indicator of prejudice. *Journal of Experimental Social Psychology, 33*, 490-509.

Wax, A., & Tetlock, P. (2005, December 1). We are all racists at heart. *Wall Street Journal*, A16.

Wittenbrink, B., & Schwarz, N., Eds. (2007). *Implicit measures of attitudes*. New York: Guilford.

Ziegert, J., & Hanges, P. (2005). Employment discrimination: The role of implicit attitudes, motivation, and a climate for racial bias. *Journal of Applied Psychology, 90*, 553-562.

Appendix C
California Program Resources

Appendix C

ADMINISTRATIVE OFFICE OF THE COURTS
EDUCATION DIVISION

Home | COMET | Serranus | Programs | AOC-TV Broadcasts | Qualifying Judicial Ethics | Search | November 16, 2011

AOC-TV Shows

The Neuroscience and Psychology of Decisionmaking
A New Way of Learning

Tuesday | March 29, 2011
9:00 am
12:15 pm (60 minutes)
(An Encore Presentation)
C CEO J M/S

In this broadcast experts will discuss both emerging and well-settled research in neuroscience and social psychology, describing how unconscious processes may affect our decisions. The show will specifically review the latest neurological and neuropsychological research that uses Magnetic Resonance Imaging (MRI's) to show how the brain reacts when different images, voices, or written work are presented. For instance, recent studies demonstrate that people may assess credibility, character, trustworthiness, potential for aggressive behavior, and intelligence based on facial features. The show will explore how we may make decisions based on information that we process unconsciously.

Part 2 and Part 3 of this series is also available for online viewing.

Content Questions:
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Senior Education Specialist
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General Questions:
Lynn Muscat
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▶ **Play Video**

The Neuroscience and Psychology of Decisionmaking, Part 1: A New Way of Learning

Resource Materials

Broadcast Evaluation

Implicit Association Test (IAT)

Counter–Stereotype Test (Stereotype Negation)

Screen Saver (Zipped file, 3.2 MB)

›› *Instructions for installing screen saver*

Education Credit

This video qualifies for:
Continuing Education: 1 hr
MCLE (Elimination of Bias): 1 hr
DV Component: no

The Personal Record of Attendance can be found in the broadcast evaluation or handouts.

CTD Archives

AOC-TV Links

➔ Schedule
➔ Viewing Locations/Training Coordinators
➔ Show Archives
➔ Satellite Troubleshooting
➔ Online Video FAQs
➔ Order DVDs
➔ Live-Event Audiocasts
➔ MCLE Credit
➔ Personal Record of Attendance Form (blank)

ADMINISTRATIVE OFFICE OF THE COURTS

Internet   100%

Broadcast Evaluation

CONTINUING THE DIALOGUE
The Neuroscience and Psychology of Decisionmaking,
Part 1: A New Way of Learning

POSITION _____

EXPERIENCE IN CURRENT ASSIGNMENT
☐ 0–6 mos   ☐ 6 mos–1 year   ☐ 1–3 years   ☐ 3–5 years   ☐ 5–10 years   ☐ 10+ years

PRIOR KNOWLEDGE OF THIS SUBJECT   ☐ Minimal   ☐ Average   ☐ Extensive

	Strongly Agree	Agree	Some-what Agree	Disagree	Strongly Disagree
1. Overall, I am satisfied with this course.					
2. The course content was relevant to my work.					
3. The faculty was effective in delivering content.					
4. I would recommend this course to my colleagues.					
5. The course materials were helpful (if applicable).					
6. The length of the course was:	Just about right		Too short		Too long

WHY DID YOU ATTEND THIS COURSE? (check all that apply)
☐ Subject matter is relevant to my job   ☐ Directed by supervisor
☐ Self development or career development   ☐ Continuing education is a job requirement
☐ Other (specify) _____

1. What was the most beneficial or helpful part of this course?

2. What will you do differently as a result of this course?

3. Was there anything about the course that hindered your learning experience?

4. What are the greatest strengths of specific instructors and do you have any suggestions for improvement?

Use additional sheets if needed. Thank you for taking the time to complete this evaluation!
Please send completed form to (415) 865-4335 (fax) or CJEREVALS@jud.ca.gov (e-mail)   C-3

ADMINISTRATIVE OFFICE
OF THE COURTS
—————————————————
EDUCATION DIVISION/CENTER FOR
JUDICIAL EDUCATION AND RESEARCH

PERSONAL RECORD OF ATTENDANCE—EDUCATION HOURS EARNED
(Pursuant to California Rules of Court 10.451 – 10.491)

REMINDER: Keep this record of attendance for your records.
This is the *only* record of your attendance you will receive.

Provider:	**AOC Education Division/Center for Judicial Education and Research (CJER)**
Subject Matter/Title:	**Continuing the Dialogue: The Neuroscience and Psychology of Decisionmaking: A New Way of Learning**
Date and Time of Activity:	
Length of Activity:	**60 minutes**
Number of Hours Achievable:	**1**

*Complete **either** the participant section or the faculty section, whichever is applicable to you.*

Name:_____

To be completed and retained by participants for their own record of participation:

Number of hours you are
claiming for participation: _____

For judicial officers only:
Number of hours applied to
Qualifying Ethics Elective
Credit, if applicable _____

☐ This program contains content on domestic violence and contributes to meeting the provisions of California Rules of Court, rule 10.464(a). (check if applicable)

Number of MCLE hours*,
if applicable _____

Legal Ethics: _____
Elimination of Bias: _____
Prevention, detection, and treatment of
substance abuse or mental illness that
impairs professional competence: _____

* Videos that qualify for MCLE credit are considered self-study unless the provider has you sign-in at the time of the activity and issues a certificate of attendance. The sign-in sheet must be returned to the AOC by your local court.

To be completed and retained by faculty for their own record of faculty service

Calculate the number of hours of faculty credit for this course:

Duration of a **New Course** (in hours):	_____	x	3	=	_____ Hours of Faculty Credit**
Duration of a **Repeated Course** (in hours):	_____	x	2	=	_____ Hours of Faculty Credit**

**Total Faculty Credit Earned: ** ** _____

** No more than half of the required or expected hours of continuing education outlined in California Rules 10.451 – 10.491 may be earned through faculty service.

Appendix D
Minnesota Program Resources

MN Implicit Bias Pilot Training Project:
"Exploring the Impact of Implicit Bias on Fairness in the Courts"

Session Agenda

Content Area	Facilitator	Time
I. Welcome and Session Overview & Participant Introductions	Judge Tanya Bransford, Connie Gackstetter	12:15-12:35 PM
II. Pairs Dialogue about the IAT Experience	Connie Gackstetter	12:35-12:45 PM
III. Documentary: "The Neuroscience and Psychology of Decision-Making: A New Way of Learning"	Judge Tanya Bransford	12:45-1:40 PM
IV. Small Group Discussion about learning from the Documentary and identification of significant themes	Judge Tanya Bransford, Connie Gackstetter	1:40- 2:10 PM
V. Stroop Test illustration	Connie Gackstetter	2:10-2:20 PM
VI. Methods for "managing" Implicit Bias	Judge Tanya Bransford	2:20-2:30 PM
VII. Small Group Discussion about professional and personal methods for managing Implicit Bias	Connie Gackstetter	2:30-2:55 PM
VIII. Summary and Final Comments	Judge Tanya Bransford	2:55 - 3:00 PM

Thank you to the MN Judicial Racial Fairness Training Sub-Committee, the Education & Organization Development Division and the National Center for State Courts for making this training possible and to the MN Judicial Branch Racial Fairness Committee for sponsoring this event!

Continuing Education Credits:
3.0 Elimination of Bias continuing education credits have been applied for from the Board of Continuing Legal Education and 3.0 continuing education credits have been approved for Continuing Judicial Education(CJE) credits and for MJB Continuing Managerial Education (CME) credits.

Questions/ Comments?
If you have any additional comments or questions about this session, please contact Connie Gackstetter. MJB Education & Organization Development Division Manager at 651-215-0047 or connie.gackstetter@courts.state.mn.us

NCSC
National Center for State Courts

Race & Ethnic Fairness in the Courts

HELPING COURTS ADDRESS IMPLICIT BIAS:
PHASE II OF A NATIONAL CAMPAIGN TO ENSURE THE RACIAL AND ETHNIC FAIRNESS OF AMERICA'S STATE COURTS

PROJECT DESCRIPTION

PURPOSE

Phase II builds on the first phase of the campaign to mobilize the expertise, experience, and commitment of state court judges and officers across the country to address both the perception and reality of racial and ethnic fairness. The first phase resulted in a national compilation of promising programs to achieve racial and ethnic fairness in five key areas:

- diverse and representative state judicial workforces;

- fair and unbiased behaviors on the part of judges, court staff, attorneys, and others subject to court authority in the courthouse;

- comprehensive, system-wide improvements to reduce racial and ethnic disparities in criminal, domestic violence, juvenile, and abuse and neglect cases;

- the availability of timely and high-quality services to improve access to the courts for limited-English-proficient persons; and

- diverse and representative juries.

The programs are available on the Campaign's Web site at http://www.ncsconline.org/ref/.

Phase II is developing national resources and providing technical assistance on implicit bias, an issue relevant to each of the five key areas and central to "fair and unbiased behaviors in the courthouse. Research indicates that all individuals develop implicit attitudes and stereotypes as a result of their experiences with the world. Because implicit biases are unconscious, they can affect behaviors and attitudes in ways, both positive and negative, unknown to the individual. Thus strategies to ensure fairness, such as education and training on diversity and cultural competency issues, should address implicit biases as well as explicit behaviors and attitudes.

STRATEGY

During Phase II, the project is working with three states—California, Minnesota, and North Dakota—to incorporate information about implicit bias into their judicial education programs and assess the effects of including this information. A National Training Team (NTT), consisting of six experts in diversity issues, judicial education, and project evaluation, is assisting the states with incorporating the information in the most appropriate way given each state's needs and resources, and determining the best method for evaluating the effects of providing the information.

Following the delivery of the education programs in the pilot jurisdictions, the NTT and project staff will summarize the lessons learned from each site and offer suggestions to other jurisdictions interested in adding implicit bias components to their judicial education curricula. In addition, limited assistance will be provided to all states through the Campaign's Web site, electronic newsletter, presentations to national organizations, and facilitation of discussions with experts and/or representatives from the pilot jurisdictions. Please visit the Campaign's Web site (http://www.ncsconline.org/ref/) and click on the implicit bias tab to obtain information on the project and available resources.

ORGANIZATION

The Campaign's Steering Committee of representatives from the Conference of Chief Justices, the Conference of State Court Administrators, the National Consortium on Racial and Ethnic Fairness in the Courts, the National Association for Court Management, the National Association of State Judicial Educators, and the National Association of Women Judges continues to guide the work of the project. Because of the specialized nature of the topic, the project also relies on the advice of two scholars in the implicit bias area as well as the National Training Team of experts. The project team also relies on the primary contacts designated by the chief justice of each state and U.S. Territory as a primary vehicle for input and dissemination.

FUNDING

The Open Society Institute, the State Justice Institute, and the National Center for State Courts fund the project.

CONTACTS

- Dr. Pamela Casey, National Center for State Courts, pcasey@ncsc.org
- Hon. Roger K. Warren, President Emeritus, National Center for State Courts, rwarren@ncsc.org
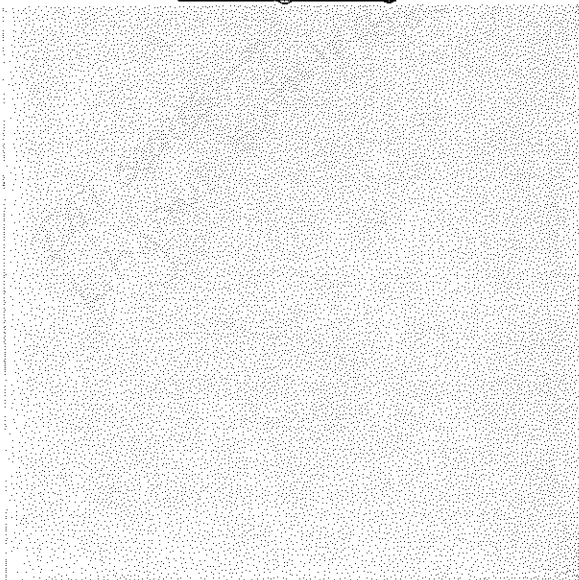
Race & Ethnic Fairness in the Courts

"Exploring the Impact of Implicit Bias in the Courts"

A PILOT TRAINING PROJECT
MAY 25, 2010 12:30-3:00PM

Sponsored by:
the MN Judicial Branch Racial Fairness Committee in conjunction with
the Education & Organization Development Division with technical support from
the National Center for State Courts

MINNESOTA
JUDICIAL BRANCH

Our Charge

(2)

The mission of the Minnesota Judicial Branch:
"To provide justice through a system that assures equal access for the fair and timely resolution of cases and controversies.

Judicial Council Policy 10.02:" It is the policy of the Minnesota Judicial Branch to *identify and eliminate barriers* to racial, ethnic, and gender fairness within the judicial system, in support of the fundamental principle of fair and equitable treatment under law. "

The mission of the Racial Fairness Committee:
- "to identify and eliminate barriers to racial and cultural fairness in all components of the Minnesota judicial system *and create action plans* to ensure public trust and confidence in the courts."

- the Racial Fairness Committee workplan supports providing ongoing education to maximize racial and cultural awareness, education and skill to promote equal access to justice and specifically requires *Cultural Competency Training for Judges and Court Staff and members of the Racial Fairness Committee*

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Bias-the Real World Impact

③

- Influences:

○ Family History	*Social, Private?*
○ Personal Experience	*Impact, Influence?*
○ Personal Values	*Engrained, Revisited*
○ Professional influences	*Standards, Informal Rules*
○ Cultural Influences	*Mine, Yours, Ours*
○ Historical Influences	*Past, current, ubiquitous*
○ **Biological??**	*The mind - body connection*

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Session Objectives:

④

- Experience & assess responses to the Implicit Attitude Test (IAT)

- Understand the research on implicit bias

- Explore the implications for decision making due to implicit bias in the Courts

- Specify the most critical behaviors affecting fairness that may be subject for dedicated action

- Identify personal and professional methods that can reduce the impact of bias

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DISCUSS:
Your Experiences with the IAT

(5)

IN PAIRS, DISCUSS:

1. Your thoughts about the IAT before you took it.

2. Observations about your physical actions as you were taking the IAT.

3. Observations about your thoughts as you were taking the IAT.

4. Initial and later thoughts about the results of your IAT assessment.

5. Questions you have about how the IAT works.

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(6)

Components of bias include:

STEREOTYPES –
Generalizations about perceived "typical" characteristics of a social category
(cognitive component)

PREJUDICE-
How one feels about members of a given social category
(affective component)

DISCRIMINATION –
How one acts toward members of a given social category
(behavioral component)

Key Definitions

- Explicit bias:
  A Conscious preference for (positive or negative) for a social category

- Implicit bias:
  A preference (positive or negative) for a social category that operates outside of our awareness

- Schemas:
  Mental "maps" by which we process *information with little or no conscientious* thought
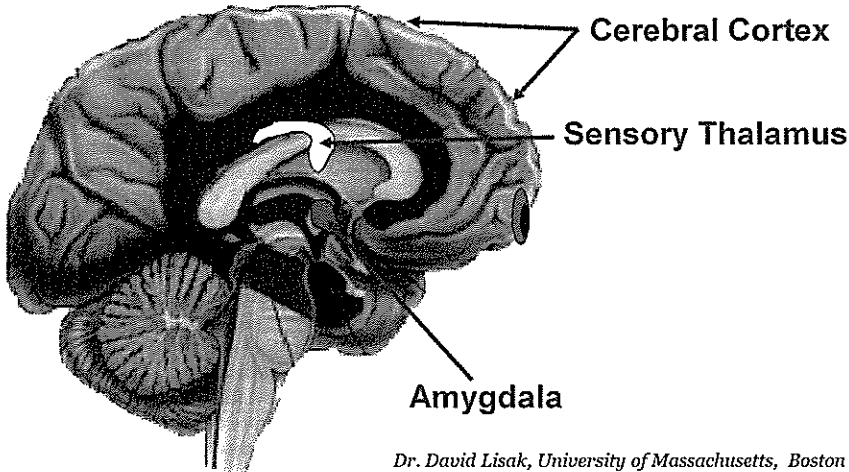
*Shawn Marsh, Ph.D., Social Psychologist; Director of
NCJFC Juvenile and Family Law Department*

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Foundations of Implicit Bias:
The Basic Neurobiology of Emotions/Fear

(7)

Cerebral Cortex

Sensory Thalamus

Amygdala

Dr. David Lisak, University of Massachusetts, Boston

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Exploring bias and the Mind-Body connection

(8)

"The Neuroscience and Psychology of Decision-Making: A New Way of Learning"

A documentary produced by the State Courts of California with support and technical assistance from the National Center for State Courts

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DISCUSS:
Your Observations from the Documentary

(9)

IN SMALL GROUPS, DISCUSS:

1. What research reported in the video struck you as the most interesting?

2. What characteristics about the factors that make us susceptible to implicit bias were most notable to you?

3. How does implicit bias occurs when we intend the opposite?

* Be prepared to report out on the themes you identified in your group*

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The boy, his Dad & the surgeon

(10)

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Automatic Processing:
Say the **Word**

⑪

YELLOW BLUE ORANGE
BLACK RED GREEN
PURPLE YELLOW RED
ORANGE GREEN BLACK
BLUE RED PURPLE
GREEN BLUE ORANGE

Automatic Processing:
Say the **Color**

⑫

Automatic Processing and Interference:
Say the **Color** of the Word
(13)
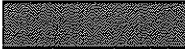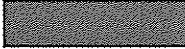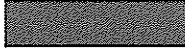
YELLOW BLUE ORANGE
BLACK RED GREEN
PURPLE YELLOW RED
ORANGE GREEN BLACK
BLUE RED PURPLE
GREEN BLUE ORANGE

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Automatic Processing and Interference:
(14)

- We are flooded with information, and process much of it automatically

- Automatic processing is necessary for us to function

- Automatic processing can be very **helpful**
  - *Saves cognitive resources*
  - *Fight or flight / primitive brain*

- Automatic processing can be very **unhelpful**
  - *We may ay a price for efficiency (interference)*
  - *Results are not always accurate*

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Emerging Strategies for Reducing Bias:

(15)

- **Awareness & Education:** *Create opportunities for learning and discussion.*
- **Environment/ Exposure:** *Assess environmental stimuli; reduce stereotypical cues and increase exposure to counter-stereotypical cues*
- **Cognitive Load;** *Reduce time constraints for acting on issues that are:*
  - At high risk for bias /   - More complex / - are Irreversible decisions
- **High Effort Processing:** *Minimize inclination to rely on intuition and past experience ("heuristics" -mental rules of thumb or "gut" instincts) when motivation and high effort is needed in the work at hand.*
- **Mindfulness:** *Maintain awareness of decision-making processes*
- **Structure Management:** *create group review, checklists, established processes to "structure" out the opportunity for biased actions.*
- **Organizational Review:** *Assess processes, roles and organizational rules to assess systemic fairness*

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DISCUSS:
Your Observations from the Documentary

(16)

IN SMALL GROUPS, DISCUSS:

1. If we are not able to "solve" implicit bias, what can we personally do to manage it?

2. Professionally, what techniques can we use to manage implicit bias?

Record the personal and professional actions your group identified on the action planning worksheets

* **Be prepared to report out on actions you identified in your group***

MINNESOTA JUDICIAL BRANCH

Race & Ethnic Fairness in the Courts

"Exploring the Impact of Implicit Bias
in the Courts" - Summary

(17)

KEY LEARNING

OUR RESPONSIBILITIES

ACTIONS WE CAN TAKE

MINNESOTA
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Race & Ethnic Fairness in the Courts

"Exploring the Impact of Implicit Bias in the Courts"

Participant Worksheet

I. Your Experience with the Implicit Attitude Test:

IN PAIRS, Discuss:

1. Your thoughts about the IAT before you took it.

2. Observations about your physical actions as you were taking the IAT.

3. Observations about your thoughts as you were taking the IAT.

4. Initial and later thoughts about the results of your IAT assessment.

5. Questions you have about how the IAT works.

II. Your Observations from the Documentary- Part I

IN small groups, Discuss:

1. What research reported in the video struck you as the most interesting?

2. What characteristics about the factors that make us susceptible to implicit bias were most notable to you?

3. How does implicit bias occurs when we intend the opposite?

* Be prepared to report out on the themes you identified in your group*

Race & Ethnic Fairness in the Courts

"Exploring the Impact of Implicit Bias in the Courts"

III. Your Observations from the Documentary – Part II

IN small groups, Discuss:

1. If we are not able to "solve" implicit bias, what can we personally do to manage it?

2. Professionally, what techniques can we use to manage implicit bias?

4. Other comments about what can be done?

* Be prepared to report out on actions you identified in your group*

The Lens of Implicit Bias

By Shawn C. Marsh, Ph.D.

Consider for a moment the number of people and decisions involved in even the most common situations within our justice system. Take an adolescent who is accused of shoplifting. The store security officer first decides whether or not the youth actually shoplifted merchandise, then the store owner decides whether or not the act warrants involving the police. Law enforcement, if called, then decides whether or not to charge or even arrest the youth. Depending on that decision, detention or probation staff may become involved and make decisions around detainment or diversion. Decisions continue to accumulate as the youth moves through the system—up to and including decisions made by juvenile and family court judges.

Decision points exist from the moment of initial contact with the justice system until case resolution, and each decision point is an opportunity for dozens (if not many dozens) of people to make a choice that can have a profound effect on the life of the juvenile and his or her family. Given the impact of these decisions on children, youth, families, victims, and communities, it is in our best interest to understand factors that shape our thinking—particularly those that can lead to unintentional, but real, disparate treatment in cases before juvenile and family courts.

Social psychologists are fundamentally interested in understanding how people think, feel, and behave in the presence of others. Accordingly, social psychological research tends to focus on groups of two or more people (e.g., juries or gangs) and how people respond to social information (e.g., perceived norms and power). Many social psychologists have joined the "cognitive revolution," born in part from advances in neuroscience, which has refocused the science of psychology on developing a fuller understanding of how our brains process information and influence behavior. For social psychologists, this shift means exploring social cognition—or how we actually perceive and process information about others and our interactions with others. One area of research in social cognition that has gained substantial attention from social and cognitive psychologists alike is implicit bias. This phenomenon also has gained pop-culture recognition after being explored in Malcolm Gladwell's best-selling book *Blink*. Before providing an overview of implicit bias, however, it is important to set a foundation for the discussion.

THE PROS AND CONS OF AUTOPILOT

We process a lot of information in a typical day, and not just the steady stream of phone calls, e-mails, and paperwork most of us face. For example, in one fashion or another, you are at this moment receiving information about the temperature of the room, the boldness of the typeset in this article, the hum of lights or nearby appliances, the feeling of being hungry or full, to name just a few possible sensory inputs. We are literally bombarded by stimulus and information. Imagine for a moment if you had to attend to and accurately process all of this data. Most would agree this would be a daunting or even impossible task. In fact, if we did have to attend to and fully process all of the stimulus and information we face, we likely could not function or at least not function well.

Fortunately for us, we have a (relatively) sophisticated brain. As human beings, we possess the ability to deal efficiently with the

Appendix E
North Dakota Program Resources

Implicit Bias

A Primer for Courts

Jerry Kang

Prepared for the National Campaign to Ensure the Racial and Ethnic Fairness of America's State Courts

August 2009

Training Agenda for Implicit Bias

North Dakota

November 23, 2009

1:00 p.m. – 1:10 p.m.:   Introductions and overview of training

1:10 p.m. – 1:50 p.m.:   Video clips from "Race: The Power of an Illusion" and discussion questions

1:50 p.m. – 2:00 p.m.:   Break

2:00 p.m. – 3:00 p.m.:   Social cognition and decision-making

3:00 p.m. – 3:10 p.m.:   Break

3:10 p.m. – 4:00 p.m.:   Small group breakout # 1 [debrief and stereotype exercise]

4:00 p.m. – 4:10 p.m.:   Break

4:10 p.m. – 4:55 p.m.:   Small group breakout # 2 [strategies to reduce implicit bias and personal planning (self-efficacy priming/goal setting exercise)]

4:55 p.m. – 5:00 p.m.:   Closing and evaluations

Materials:

The Lens of Implicit Bias [article]
Is Your Baby Racist? [article]

[Pictures of various groups for stereotype exercise]

Social Cognition and Decision-Making

Shawn C. Marsh, Ph.D.

Director
Juvenile and Family Law Department
National Council of Juvenile and Family Court Judges

North Dakota
November 2009

NCSC — National Center for State Courts

NCJFCJ — NATIONAL COUNCIL OF JUVENILE AND FAMILY COURT JUDGES

Race & Ethnic Fairness in the Courts

Goals of this Presentation
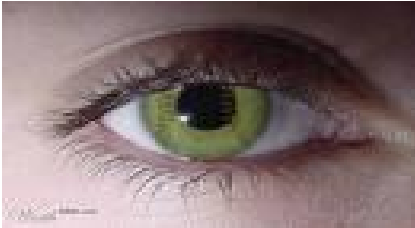
l Normalize the association between information processing and how we relate to others.

l Examine implicit bias and the "condition" of being human.

l Challenge the notion of "color blind".

l Context is race (DMC/MOR), but could extend to many other characteristics or groups.

l Nothing presented today, however, is an excuse.

But First… Pick A Card

Focus On Your Card

Your Card Is Gone

Names?

Repeat After Me…

Croak

Poke

Joke

Soak

Broke

???

Bias and Decision-Making

- Complex and nuanced.
- Intertwined with many other social cognitive processes.
  - Attitudes
  - Heuristics
  - Schemas
  - Stereotypes
- So… let's start with some basic definitions…

Terminology

- Social cognition: how people process social information
- Racism: prejudice and/or discrimination based on race
  - Prejudice (affective)
  - Discrimination (behavioral)
  - Stereotype (cognitive)

Terminology

- In group (us) versus out group (them)
- Minimal group paradigm – it doesn't take much
- Bias is a preference (+ or -) for a group based on attitudes, heuristics, stereotypes, etc.
- Heuristic: mental "rule of thumb"
- Explicit (aware) versus implicit (unaware)
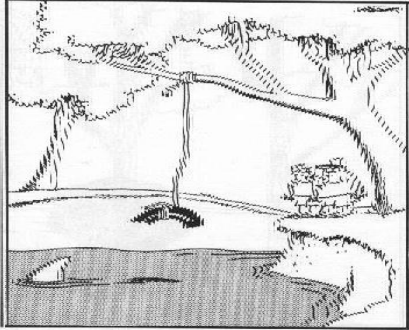
Implicit (unaware)

- Processes affectionately known as…
  - "mind bugs" or "brain bugs"
- Also known as…
  - "head hiccups"
  - "cranium critters"
  - "mind moles"
  - "noggin gnomes"
  - "chrome dome noggin gnomes"
  - "psyche mice"
  - "gourd goblins"

- Example: Basketball Game

Information Processing

- We are bombarded with information and stimulus every minute of our existence.
- Processing all of this "stuff" would simply overwhelm us.
- Our brain has to quickly sort through and categorize information and stimulus for us to function.

- And that (automatic processing) can be very useful…

…for example…!

…and another (more routine) example…

l Please read the following…
   l I adda a qwer zcada eqai adfjk, fdaklad qeeqmoxn pwiq te nveh majdury. U dogn fo usni rep soz cocley. Zorg noyb goo?

l Now, read this…
   l I cnnoat blveiee I aulaclty uesdnatnrd waht I am rdanieg. Aoccdrnig to rscheearch at Cmabrigde Uinervtisy, it deosn't mttaer inwaht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is taht the frist and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it wouthit a porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe.

Automatic Processing and Interference:
Read the Word

Automatic Processing and Interference:
Say the Color **of the Word**

Recap

l We are flooded with information, and process much of it automatically
l Automatic processing is necessary for us to function
l Automatic processing can be very **helpful**
   l Saves cognitive resources
   l Fight or flight / primitive brain
l Automatic processing can be very **unhelpful**
   l On some tasks we pay a price for efficiency (interference)
   l Is not always accurate

The Lunch Date

Stereotypes

- The process of developing **categories** of information begins at birth.
- As we mature, categories develop around observables.
  - Color
  - Gender
  - Age
  - Body type
- Categories also begin to include those that are socially constructed.
  - Professor
  - Truck driver
  - Nurse
  - Basketball player

Stereotypes

- Over time, we learn to associate certain characteristics with certain categories of information.
- We acquire characteristics of categories from many sources (e.g., parents).
- The characteristics attached to a given category are a stereotype.
- Stereotypes can be positive or negative as well as generally accurate or inaccurate.
- They are roughly diagnostic ("quick and dirty")

Think of Stereotypes

Think of Stereotypes

Implicit Bias

- In contrast to explicit bias, implicit bias operates outside of awareness.
- All of these things "flavor" our decisions.
  - Automatic processing
  - Stereotypes
  - Fundamental attribution error
- Implicit bias is a preference for a group based on implicit attitudes, stereotypes, etc.

How Do We Know It Exists?

l Implicit Association Test (IAT)
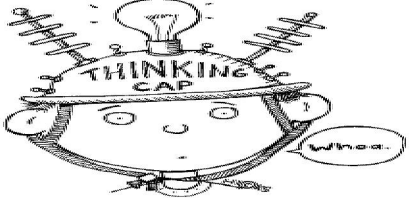
Implications

Can It Be Controlled?

l First, we need to think about thinking some more…

l Also known as "meta-cognition"

Thinking about Thinking

l Low effort processing
  l Quick and peripheral
  l Relies on heuristics
  l Low accuracy in many circumstances
  l More likely when we are under high cognitive load or stress
  l Weaknesses related to ordinary personology (our understanding of how the world works)

Low Effort Processing

l Example: coin flips (probability)
  l Nine fair coin flips come up heads – what are the chances the next flip is going to be heads as well?

Low Effort Processing (continued)

l Example: bank teller (representativeness)
  l Angie is 30 years old. In college, she majored in accounting. She also was very concerned with issues of social justice and discrimination. Is Angie more likely to be:
    l a bank teller, or
    l bank teller and active in the feminist movement?

l Heuristic / logic errors can contribute to biased decisions…

Thinking Errors: We Are Not Alone

PENGUINS ARE BLACK AND WHITE.
SOME OLD TV SHOWS ARE BLACK AND WHITE.
THEREFORE, SOME PENGUINS ARE OLD TV SHOWS.
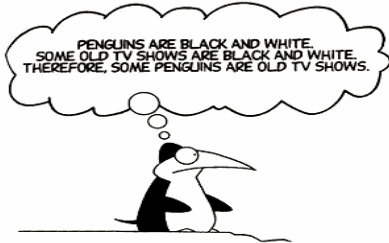
Logic: another thing that
penguins aren't very good at.

Thinking about Thinking

- High effort processing
  - Deliberate and central
  - Considers "rules" carefully
  - More likely under low cognitive load and low stress
  - Accuracy tends to be better
  - Accuracy can be further enhanced through training (e.g., regarding probability)
  - Can help suppress acting on "generalized" information (e.g., stereotypes)

So…?

- We can work to process information differently and counteract some of the influence of stereotypes and judgment heuristics.
- Requires…
  - Self awareness
  - Intrinsic and/or extrinsic motivation
  - An "active fight" each and every time
- Let's look at some specific strategies…

Strategies

- Education

- Reduce cognitive load and stress

- Engage high effort processing

Strategies (continued)

- Organizational review
  - Honest examination of workforce and power structure.
  - Strive to set new and positive norms (tell me what to do right alongside what is wrong).
  - Open communication.
  - Culture of holding each other accountable.

Strategies (continued)

ı Exposure

ı Environment

ı Checklists

Strategies (continued)

ı Mindfulness

ı Debiasing

ı Look to other fields

Summary: No Easy Answers

ı Stereotyping and implicit bias are normal cognitive processes.

ı Everyone is susceptible to implicit social cognition - understanding this provides a common ground for dialogue.

ı Much of social cognition is an automatic process - but not an excuse.

ı Education can reduce stereotypes, prejudice, and discrimination. (Talk to your children!)

Summary: No Easy Answers

ı Historical, sociological, and shame based approaches to reducing MOR/DMC **alone** are likely inadequate.

ı Considering the psychology of how we process and act on information must be part of the discussion regarding MOR/DMC.

ı Efforts must be made to provide the conditions conducive to "controlling" implicit social cognitive processes.

Final Exam

ı **A man and his teenaged son went fishing for the day.**

ı **On the way home they had a terrible accident.**

ı **The father was killed and the son was seriously injured.**

ı **When the son arrived in the emergency room, the doctor looked down of the boy and said, "Oh no! This is my son!"**

ı **How can this be?**

QUESTIONS?

Shawn C. Marsh, Ph.D.
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    Family Court Judges
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The Lens of Implicit Bias

By Shawn C. Marsh, Ph.D.

Consider for a moment the number of people and decisions involved in even the most common situations within our justice system. Take an adolescent who is accused of shoplifting. The store security officer first decides whether or not the youth actually shoplifted merchandise, then the store owner decides whether or not the act warrants involving the police. Law enforcement, if called, then decides whether or not to charge or even arrest the youth. Depending on that decision, detention or probation staff may become involved and make decisions around detainment or diversion. Decisions continue to accumulate as the youth moves through the system—up to and including decisions made by juvenile and family court judges.

Decision points exist from the moment of initial contact with the justice system until case resolution, and each decision point is an opportunity for dozens (if not many dozens) of people to make a choice that can have a profound effect on the life of the juvenile and his or her family. Given the impact of these decisions on children, youth, families, victims, and communities, it is in our best interest to understand factors that shape our thinking—particularly those that can lead to unintentional, but real, disparate treatment in cases before juvenile and family courts.

Social psychologists are fundamentally interested in understanding how people think, feel, and behave in the presence of others. Accordingly, social psychological research tends to focus on groups of two or more people (e.g., juries or gangs) and how people respond to social information (e.g., perceived norms and power). Many social psychologists have joined the "cognitive revolution,"

born in part from advances in neuroscience, which has refocused the science of psychology on developing a fuller understanding of how our brains process information and influence behavior. For social psychologists, this shift means exploring social cognition—or how we actually perceive and process information about others and our interactions with others. One area of research in social cognition that has gained substantial attention from social and cognitive psychologists alike is implicit bias. This phenomenon also has gained pop-culture recognition after being explored in Malcolm Gladwell's best-selling book *Blink*. Before providing an overview of implicit bias, however, it is important to set a foundation for the discussion.

THE PROS AND CONS OF AUTOPILOT

We process a lot of information in a typical day, and not just the steady stream of phone calls, e-mails, and paperwork most of us face. For example, in one fashion or another, you are at this moment receiving information about the temperature of the room, the boldness of the typeset in this article, the hum of lights or nearby appliances, the feeling of being hungry or full, to name just a few possible sensory inputs. We are literally bombarded by stimulus and information. Imagine for a moment if you had to attend to and accurately process all of this data. Most would agree this would be a daunting or even impossible task. In fact, if we did have to attend to and fully process all of the stimulus and information we face, we likely could not function or at least not function well.

Fortunately for us, we have a (relatively) sophisticated brain. As human beings, we possess the ability to deal efficiently with the

Appendix F
Additional Data on State Programs

This appendix includes the following tables based on pre- and post-assessment questionnaires completed for each state program on implicit bias:

California

- C-1: Participants' Current Position
- C-2: Participants' Experience in Current Position
- C-3: Participants' Rating of Prior Knowledge of Subject
- C-4: Post-Assessment Responses of Those Who Scored Correctly on Pre-Assessment
- C-5: Post-Assessment Responses of Those Who Scored Incorrectly on Pre-Assessment

Minnesota

- M-1: Post-Assessment Responses of Those Who Scored Correctly on Pre-Assessment
- M-2: Post-Assessment Responses of Those Who Scored Incorrectly on Pre-Assessment

North Dakota

- ND-1: Participants' Current Position
- ND-2: Participants' Experience in Current Position
- ND-3: Participants' Rating of Prior Knowledge of Subject
- ND-4: Participants' Race/Ethnicity
- ND-5 Post-Assessment Responses of Those Who Scored Correctly on Pre-Assessment
- ND-6 Post-Assessment Responses of Those Who Scored Incorrectly on Pre-Assessment

California Tables[1]

Table C-1: Participants' Current Position

Position	Number	Percentage
Judge/Justice	12	16.9
Manager/Supervisor	16	22.5
Attorney	10	14.1
Other judicial officer	5	7.0
Clerk	11	15.5
Analyst	4	5.6
Support staff	9	12.7
Other	4	5.6
Total	**71**	**100.0**

Table C-2: Participants' Experience in Current Position

Length of Experience	Number	Percentage
6 months or less	2	2.8
6 months to 1 year	2	2.8
1 to 3 years	13	18.3
3 to 5 years	8	11.3
5 to 10 years	21	29.6
More than 10 years	25	35.2
Total	**71**	**100.0**

Table C-3: Participants' Rating of Prior Knowledge of Subject

Length of Experience	Number	Percentage
Minimal	46	65.7
Moderate	21	30.0
Extensive	3	4.3
Total	**70**	**100.0**

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[1] California tables are based on the responses of 71 participants who answered at least one question (the same question) on both the pre- and post-program assessment questionnaires.

Table C-4: Post-Assessment Responses
of Those Who Scored Correctly on Pre-Assessment[2]

Questionnaire Item (bolded answer is correct)	Correct responses Prior to Program	Post-Program Responses*		
		☑	☒	?
1. Implicit or unconscious bias: (a) Is produced by the unconscious processing of stereotypes, (b) Is not influenced by an individual's belief that people should all be treated the same, (c) Is difficult to alter, (d) **All of the above**	47	85%	13%	2%
2. Which of the following techniques have been shown to limit the influence of implicit or unconscious bias? (a) Judicial intuition, (b) Morality plays, (c) **Exposure to positive, counter-stereotypical exemplars**, (d) All of the above	37	78%	16%	5%
3. The Implicit Association Test (IAT): (a) Measures reaction time, (b) Pairs a value judgment (e.g., good or bad) with a stimulus such as a photo of someone, (c) Is better suited for educational rather than diagnostic purposes, (d) **All of the above**	26	62%	39%	0%
4. What is the best evidence that implicit bias exists? (a) Analysis of criminal justice statistics, (b) **Scores on tests that measure implicit bias (e.g., IAT) have been shown to correlate with behavior**, (c) Self-reports, (d) All of the above	22	96%	5%	0%
5. Which of the following techniques have <u>not</u> been used to measure implicit bias? (a) Implicit Association Test (IAT,) (b) **Polygraph**, (c) MRIs, (d) All of the above	27	100%	0%	0%

*☑ =correct response, ☒=incorrect response, ?=no response

[2] Of the eight items included on the California pre- and post-assessment questionnaires, one question was eliminated from the analyses because it included two correct response options but did not allow respondents to select both. The omitted question is "Which of the following thought processes is consciously activated? a. Implicit bias, b. explicit bias, c. automatic processing, d. stereotypes, or e. none of the above." Both b and d are correct responses. Two other items did not have specific correct answers; rather they gauged opinions about the extent of implicit bias. These items were analyzed separately. Thus Tables C-4 and C-5 include five questions.

**Table C-5: Post-Assessment Responses
of Those Who Scored Incorrectly on Pre-Assessment[3]**

Questionnaire Item (bolded answer is correct)	Incorrect Responses Prior to Program	Post-Program Responses*		
		☑	☒	?
1. **Implicit or unconscious bias:** (a) Is produced by the unconscious processing of stereotypes, (b) Is not influenced by an individual's belief that people should all be treated the same, (c) Is difficult to alter, (d) **All of the above**	23	52%	48%	0%
2. **Which of the following techniques have been shown to limit the influence of implicit or unconscious bias?** (a) Judicial intuition, (b) Morality plays, (c) **Exposure to positive, counter-stereotypical exemplars**, (d) All of the above	30	47%	47%	7%
3. **The Implicit Association Test (IAT):** (a) Measures reaction time, (b) Pairs a value judgment (e.g., good or bad) with a stimulus such as a photo of someone, (c) Is better suited for educational rather than diagnostic purposes, (d) **All of the above**	35	54%	43%	3%
4. **What is the best evidence that implicit bias exists?** (a) Analysis of criminal justice statistics, (b) **Scores on tests that measure implicit bias (e.g., IAT) have been shown to correlate with behavior**, (c) Self-reports, (d) All of the above	41	42%	59%	0%
5. **Which of the following techniques have <u>not</u> been used to measure implicit bias?** (a) Implicit Association Test (IAT,) (b) **Polygraph**, (c) MRIs, (d) All of the above	32	91%	9%	0%

*☑ =correct response, ☒=incorrect response, ?=no response

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[3] See Footnote 2.

Minnesota Tables[4]

Table M-1: Post-Assessment Responses
of Those Who Scored Correctly on Pre-Assessment[5]

Questionnaire Item (bolded answer is correct)	Correct responses Prior to Program	Post-Program Responses*		
		☑	☒	?
1. Implicit bias: (a) Is produced by the unconscious processing of schemas and stereotypes, (b) Is not influenced by an individual's belief that people should all be treated the same, (c) Is difficult to alter, (d) **All of the above**	9	67%	33%	0%
2. Which of the following thought processes are activated automatically, without conscious awareness? (a) **Implicit bias,** (b) Explicit bias, (c) Profiling, (d) All of the above	6	67%	33%	0%
3. Research has shown that unconscious or implicit bias: (a) Exists in only a few jurisdictions in the US, (b) Does not occur in people who are free of explicit bias, (c) **Is related to behavior in some situations,** (d) All of the above	9	89%	11%	0%
4. The Implicit Association Test (IAT): (a) Measures response time, (b) Pairs a value judgment (e.g., good or bad) with a stimulus such as a photo of someone, (c) Should not be used to diagnose a particular individual as being biased, (d) a and b, (e) **All of the above**	8	50%	50%	0%
5. Which of the following techniques have been shown to limit the influence of implicit bias? (a) Check lists, (b) Paced, deliberative decision-making, (c) Exposure to positive, counter-stereotypical exemplars, (d) **All of the above**	13	85%	15%	0%
6. What evidence do we have that implicit bias exists? (a) Analysis of criminal justice statistics, (b) Scores on tests that measure implicit bias (e.g., IAT) have been shown to correlate with behavior, (c) Magnetic Resonance Imaging (MRIs), (d) **b and c**, (e) All of the above	7	29%	71%	0%
7. Justice professionals can fail to recognize the influence of implicit bias on their behavior because: (a) They are skilled at constructing arguments that rationalize their behavior, (b) The large volume of work they are required to do makes it difficult to be cognizant of implicit bias, (c) They do not believe they are biased, (d) **All of the above**	13	100%	0%	0%

*☑ =correct response, ☒=incorrect response, ?=no response

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[4] The Minnesota pre- and post-assessment results are based on the responses of 17 participants who completed at least one question (the same question) on both the pre- and post-assessment questionnaires.

[5] One of the eight items included on the Minnesota pre- and post-assessment questionnaires, was eliminated from the analyses because a typographical error resulted in a flawed question. The omitted question is "Methods to consider when managing implicit bias are: a. exposure to stereotypical images, b. adherence to use of procedure and checklists, c. reduce cognitive load in situations at high risk for bias, d. a and c." Both b and c are correct, but there was no response option for both b and c. Thus Tables M-1 and M-2 include seven questions.

**Table M-2: Post-Assessment Responses
of Those Who Scored Incorrectly on Pre-Assessment[6]**

Questionnaire Item (bolded answer is correct)	Incorrect Responses Prior to Program	Post-Program Responses*		
		☑	☒	?
1. **Implicit bias:** (a) Is produced by the unconscious processing of schemas and stereotypes, (b) Is not influenced by an individual's belief that people should all be treated the same, (c) Is difficult to alter, (d) **All of the above**	8	63%	38%	0%
2. **Which of the following thought processes are activated automatically, without conscious awareness?** (a) **Implicit bias,** (b) Explicit bias, (c) Profiling, (d) All of the above	11	46%	55%	0%
3. **Research has shown that unconscious or implicit bias:** (a) Exists in only a few jurisdictions in the US, (b) Does not occur in people who are free of explicit bias, (c) **Is related to behavior in some situations,** (d) All of the above	8	38%	63%	0%
4. **The Implicit Association Test (IAT):** (a) Measures response time, (b) Pairs a value judgment (e.g., good or bad) with a stimulus such as a photo of someone, (c) Should not be used to diagnose a particular individual as being biased, (d) a and b, (e) **All of the above**	9	11%	89%	0%
5. **Which of the following techniques have been shown to limit the influence of implicit bias?** (a) Check lists, (b) Paced, deliberative decision-making, (c) Exposure to positive, counter-stereotypical exemplars, (d) **All of the above**	4	50%	50%	0%
6. **What evidence do we have that implicit bias exists?** (a) Analysis of criminal justice statistics, (b) Scores on tests that measure implicit bias (e.g., IAT) have been shown to correlate with behavior, (c) Magnetic Resonance Imaging (MRIs), (d) **b and c**, (e) All of the above	10	10%	90%	0%
7. **Justice professionals can fail to recognize the influence of implicit bias on their behavior because:** (a) They are skilled at constructing arguments that rationalize their behavior, (b) The large volume of work they are required to do makes it difficult to be cognizant of implicit bias, (c) They do not believe they are biased, (d) **All of the above**	4	25%	75%	0%

*☑ =correct response, ☒=incorrect response, ?=no response

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[6] See Footnote 5.

North Dakota Tables[7]

Table ND-1: Participants' Current Position

Position	Number	Percentage
Judge/Justice	31	91.2
Attorney	1	2. 9
Other judicial officer	1	2.9
Court executive officer	1	2.9
Total	**34**	**100.0**

Table ND-2: Participants' Experience in Current Position

Length of Experience	Number	Percentage
6 months or less	1	2.9
6 months to 1 year	1	2.9
1 to 3 years	0	0.0
3 to 5 years	6	17.6
5 to 10 years	4	11.8
More than 10 years	22	64.7
Total	**34**	**100.0**

Table ND-3: Participants' Rating of Prior Knowledge of Subject

Length of Experience	Number	Percentage
Minimal	15	44.1
Moderate	18	52.9
Extensive	1	2.9
Total	**34**	**100.0**

Table ND-4: Participants' Race/Ethnicity

Length of Experience	Number	Percentage
White	33	97.1
White and Native American	1	2.9
Total	**34**	**100.0**

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[7] North Dakota's analyses are based on the responses of 35 participants who completed at least one question (the same question) on both the pre- and post-assessment questionnaires.

**Table ND-5: Post-Assessment Responses
of Those Who Scored Correctly on Pre-Assessment[8]**

Questionnaire Item (bolded answer is correct)	Correct responses Prior to Program	Post-Program Responses* ☑	☒	?
1. **In general, do you think that it is possible for judges' decisions and court staffs' interactions with the public to be unwittingly influenced by unconscious bias toward particular racial/ethnic groups?** (a) **Yes**, (b) No	35	100%	0%	0%
2. **Research has shown that unconscious or implicit bias:** (a) Exists in only a few jurisdictions in the US, (b) Does not occur in people who are free of explicit bias, (c) **Is related to behavior in some situations**, (d) All of the above	24	92%	8%	0%
3. **Implicit bias:** (a) Is produced by the unconscious processing of schemas and stereotypes, (b) Is not influenced by an individual's belief that people should all be treated the same, (c) Is difficult to alter, (d) **All of the above**	26	69%	31%	0%
4. **Which of the following techniques have been shown to limit the influence of implicit bias?** (a) Judicial intuition, (b) Moral maturity enhancement, (c) **Exposure to positive, counter-stereotypical exemplars**, (d) All of the above	8	88%	13%	0%
5. **The Implicit Association Test (IAT):** (a) Measures response time, (b) Pairs a value judgment (e.g., good or bad) with a stimulus such as a photo of someone, (c) Should not be used to diagnose individual bias, (d) **All of the above**	9	67%	22%	11%
6. **What evidence do we have that implicit bias exists?** (a) Analysis of criminal justice statistics, (b) **Scores on tests that measure implicit bias (e.g., IAT) have been shown to correlate with behavior**, (c) Self-report, (d) All of the above	5	40%	40%	20%
7. **Which of the following techniques has not been used to measure implicit bias?** (a) Implicit Association Test (IAT), (b) **Polygraph**, (c) Paper and pencil tests, (d) MRIs	9	67%	33%	0%

*☑ =correct response, ☒=incorrect response, ?=no response

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[8] The North Dakota pre- and post-program assessment questionnaires included eight questions. One question was eliminated from the analyses because, in retrospect, it could have been confusing to respondents. The omitted question is "Which of the following thought processes is consciously activated? a. Implicit bias, b. explicit bias, c. automatic processing, d. stereotypes, e. schemas, or f. none of the above." B is always consciously activated; d and e can be consciously and unconsciously activated. Thus Tables ND-5 and ND-6 include seven questions.

**Table ND-6: Post-Assessment Responses
of Those Who Scored Incorrectly on Pre-Assessment[9]**

Questionnaire Item (bolded answer is correct)	Correct responses Prior to Program	Post-Program Responses*		
		☑	☒	?
1. **In general, do you think that it is possible for judges' decisions and court staffs' interactions with the public to be unwittingly influenced by unconscious bias toward particular racial/ethnic groups?** (a) **Yes**, (b) No	0	0%	0%	0%
2. Research has shown that unconscious or implicit bias: (a) Exists in only a few jurisdictions in the US, (b) Does not occur in people who are free of explicit bias, (c) **Is related to behavior in some situations**, (d) All of the above	10	60%	40%	0%
3. **Implicit bias:** (a) Is produced by the unconscious processing of schemas and stereotypes, (b) Is not influenced by an individual's belief that people should all be treated the same, (c) Is difficult to alter, (d) **All of the above**	9	67%	22%	11%
4. **Which of the following techniques have been shown to limit the influence of implicit bias?** (a) Judicial intuition, (b) Moral maturity enhancement, (c) **Exposure to positive, counter-stereotypical exemplars**, (d) All of the above	27	26%	67%	7%
5. **The Implicit Association Test (IAT):** (a) Measures response time, (b) Pairs a value judgment (e.g., good or bad) with a stimulus such as a photo of someone, (c) Should not be used to diagnose individual bias, (d) **All of the above**	24	17%	83%	0%
6. **What evidence do we have that implicit bias exists?** (a) Analysis of criminal justice statistics, (b) **Scores on tests that measure implicit bias (e.g., IAT) have been shown to correlate with behavior**, (c) Self-report, (d) All of the above	30	3%	97%	0%
7. **Which of the following techniques has not been used to measure implicit bias?** (a) Implicit Association Test (IAT), (b) **Polygraph**, (c) Paper and pencil tests, (d) MRIs	26	19%	77%	4%

*☑ =correct response, ☒=incorrect response, ?=no response

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[9] See footnote 8.

Appendix G
Resources to Address Implicit Bias

Reducing the Influence of Implicit Bias

Compared to the science on the existence of implicit bias and its potential influence on behavior, the science on ways to mitigate implicit bias is relatively young and often does not address specific applied contexts such as judicial decision making. Yet, it is important for strategies to be concrete and applicable to an individual's work to be effective; instructions to simply avoid biased outcomes or respond in an egalitarian manner are too vague to be helpful (Dasgupta, 2009). To address this gap in concrete strategies applicable to court audiences, the project team reviewed the science on general strategies to address implicit bias and considered their potential relevance for judges and court professionals. They also convened a small group discussion with judges and judicial educators (referred to as the Judicial Focus Group) to discuss potential strategies. The results of these efforts are presented in four tables:

Table G-1. *Combating Implicit Bias in the Courts: Understanding Risk Factors* identifies and describes conditions that exacerbate the effects of implicit bias on decisions and actions.

Table G-2. *Combating Implicit Bias in the Courts: Seeking Change* identifies and describes seven general research-based strategies that may help attenuate implicit bias or mitigate the influence of implicit bias on decisions and actions. The table briefly summarizes empirical findings that support the strategies and offers concrete suggestions, both research-based and extrapolated from existing research, to implement each strategy. Some of the suggestions in the table focus on individual actions to minimize the influence of implicit bias, and others focus on organizational efforts to (a) eliminate situational or systemic factors that may engender implicit bias and (b) promote a more egalitarian court culture.

Table G-3. *Combating Implicit Bias in the Courts: Understanding Risk Factors—Selected Research Findings* and Table G-4. *Combating Implicit Bias in the Courts: Seeking Change—Selected Research Findings* provide summaries of the research cited in the preparation of the first two tables for those interested in better understanding the basis for the risk factors and suggested strategies.

The project team offers the four tables as a resource for judicial educators developing programs on implicit bias with the understanding that the information should be reviewed and revised as new research and lessons from the field expand current knowledge.

Reference

Dasgupta, Nilanjana. (2009). Mechanisms underlying the malleability of implicit prejudice and stereotypes: The role of automaticity and cognitive control. In T. Nelson (Ed). *Handbook of prejudice, stereotyping, and discrimination* (pp. 267-284). New York: Psychology Press.

G-1 Combating Implicit Bias in the Courts: Understanding Risk Factors

The following conditions increase the likelihood that implicit bias may influence one's thoughts and actions.

Risk factor: Certain emotional states

Certain emotional states (anger, disgust) can exacerbate implicit bias in judgments of stigmatized group members, even if the source of the negative emotion has nothing to do with the current situation or with the issue of social groups or stereotypes more broadly (e.g., DeSteno, Dasgupta, Bartlett, & Cajdric, 2004; Dasgupta, DeSteno, Williams, & Hunsinger, 2009). Happiness may also produce more stereotypic judgments, though this can be consciously controlled if the person is motivated to do so (Bodenhausen, Kramer, & Susser, 1994).

Risk factor: Ambiguity

When the basis for judgment is somewhat vague (e.g., situations that call for discretion; cases that involve the application of new, unfamiliar laws), biased judgments are more likely. Without more explicit, concrete criteria for decision making, individuals tend to disambiguate the situation using whatever information is most easily accessible—including stereotypes (e.g., Dovidio & Gaertner, 2000; Johnson, Whitestone, Jackson, & Gatto, 1995).

Risk factor: Salient social categories

A decision maker may be more likely to think in terms of race and use racial stereotypes because race often is a salient, i.e., easily-accessible, attribute (Macrae, Bodenhausen, & Milne, 1995; Mitchell, Nosek, & Banaji, 2003). However, when decision makers become conscious of the potential for prejudice, they often attempt to correct for it; in these cases, judges, court staff, and jurors would be less likely to exhibit bias (Sommers & Ellsworth, 2001).

Risk factor: Low-effort cognitive processing

When individuals engage in low-effort information processing, they rely on stereotypes and produce more stereotype-consistent judgments than when engaged in more deliberative, effortful processing (Bodenhausen, 1990). As a result, low-effort decision makers tend to develop inferences or expectations about a person early on in the information-gathering process. These expectations then guide subsequent information processing: Attention and subsequent recall are biased in favor of stereotype-confirming evidence and produce biased judgment (Bodenhausen & Wyer, 1985; Darley & Gross, 1983). Expectations can also affect social interaction between the decision maker (e.g., judge) and the stereotyped target (e.g., defendant), causing the decision maker to behave in ways that inadvertently elicit stereotype-confirming behavior from the other person (Word, Zanna, & Cooper, 1973).

Risk factor: Distracted or pressured decision-making circumstances

Tiring (e.g., long hours, fatigue), stressful (e.g., heavy, backlogged, or very diverse caseloads; loud construction noise; threats to physical safety; popular or political pressure about a particular decision; emergency or crisis situations), or otherwise distracting circumstances can adversely affect judicial performance (e.g., Eells & Showalter, 1994; Hartley & Adams, 1974; Keinan, 1987). Specifically, situations that involve time pressure (e.g., van Knippenberg, Dijksterhuis, & Vermeulen, 1999), that force a decision maker to form complex judgments relatively quickly (e.g., Bodenhausen & Lichtenstein, 1987), or in which the decision maker is distracted and cannot fully attend to incoming information (e.g., Gilbert & Hixon, 1991; Sherman, Lee, Bessennof, & Frost, 1998) all limit the ability to fully process case information. Decision makers who are rushed, stressed, distracted, or pressured are more likely to apply stereotypes – recalling facts in ways biased by stereotypes and making more stereotypic judgments – than decision makers whose cognitive abilities are not similarly constrained.

Risk factor: Lack of feedback

When organizations fail to provide feedback that holds decision makers accountable for their judgments and actions, individuals are less likely to remain vigilant for possible bias in their own decision-making processes (Neuberg & Fiske, 1987; Tetlock, 1983).

G-2 Combating Implicit Bias in the Courts: Seeking Change

The following strategies show promise in reducing the effects of implicit bias on behavior.

Strategy 1: Raise awareness of implicit bias.

Individuals can only work to correct for sources of bias that they are aware exist (Wilson & Brekke, 1994). Simply knowing about implicit bias and its potentially harmful effects on judgment and behavior may prompt individuals to pursue corrective action (cf. Green, Carney, Pallin, Ngo, Raymond, Iezzoni, & Banaji, 2007). Although awareness of implicit bias in and of itself is not sufficient to ensure that effective debiasing efforts take place (Kim, 2003), it is a crucial starting point that may prompt individuals to seek out and implement the types of strategies listed throughout this document.

What can the individual do?	What can the organization do?
1. **Seek out information on implicit bias.** Judges and court staff could attend implicit bias training sessions. Those who choose to participate in these sessions should ensure that they fully understand what implicit bias is and how it manifests in every day decisions and behavior by asking questions, taking the IAT, and/or reading about the scientific literature as a follow-up to the seminar.	1. **Provide training on implicit bias.** Courts could develop an implicit bias training program that presents participants not only with information about what implicit bias is and how it works, but that also includes information on specific, concrete strategies participants could use in their professional work to mitigate the effects of implicit bias. Judicial educators could present information about some of the other strategies listed in this report, or they could engage participants in a critical thinking activity designed to help them develop and/or tailor their own strategies. The Judicial Focus Group (JFG) thought that this type of training would be more effective if the program contained the following: a. **A facilitator judge to help conduct the training or sit on the panel.** If the court conducts a training program or hosts a panel on implicit bias as part of a symposium on judicial ethics, the JFG indicated that judges would add credibility to the session. Judges typically respond well when one of "their own" speaks out in support of an issue or position. The judge's presence could help make the session less threatening to participating judges and could help couch the discussion in terms of what can be done to make better decisions.

b. **Many diverse examples of implicit bias in professional judgment and behavior.** The JFG felt that training should provide illustrative examples of implicit bias that span several professional disciplines (e.g., NBA officials, medical treatment decisions, hiring decisions) to show how pervasive the phenomenon is.

c. **Experiential learning techniques.** The JFG suggested that small group exercises and other experiential learning techniques could help make information more personally relevant, which could provide a valuable frame of reference for those who are expected to resist the idea of implicit bias. Brain teaser exercises may be used to introduce the topic and demonstrate its broad application beyond race to gender, class, age, weight, and other stigmatized social categories.

Note: The JFG also encouraged a focus on implicit bias training for judges *before* they take the bench by making this training a component of new judge orientation. This way, future implicit bias training and requirements will simply be a part of "business as usual" and will incur less resistance.

Strategy 2: Seek to identify and consciously acknowledge real group and individual differences.

The popular "color blind" approach to egalitarianism (i.e., avoiding or ignoring race; lack of awareness of and sensitivity to differences between social groups) fails as an implicit bias intervention strategy. "Color blindness" actually produces greater implicit bias than strategies that acknowledge race (Apfelbaum, Sommers, & Norton, 2008). Cultivating greater awareness of and sensitivity to group and individual differences appears to be a more effective tactic: Training seminars that acknowledge and promote an appreciation of group differences and multi-cultural viewpoints can help reduce implicit bias (Rudman, Ashmore, & Gary, 2001; Richeson & Nussbaum, 2004).

Diversity training seminars can serve as a starting point from which court culture itself can change. When respected court leadership actively supports the multiculturalism approach, those egalitarian goals can influence others (Aarts, Gollwitzer, & Hassin, 2004). Moreover, when an individual (e.g., new employee) discovers that peers in the court community are more egalitarian, the individual's beliefs become less implicitly biased (Sechrist & Stangor, 2001). Thus, a system-wide effort to cultivate a workplace environment that supports egalitarian norms is important in reducing individual-level implicit bias. Note, however, that mandatory training or other imposed pressure to comply with egalitarian standards may elicit hostility and resistance from some types of individuals, failing to reduce implicit bias (Plant & Devine, 2001).

In addition to considering and acknowledging group differences, individuals should purposely compare and individuate stigmatized group members. By defining individuals in multiple ways other than in terms of race, implicit bias may be reduced (e.g., Djikic, Langer, & Stapleton, 2008; Lebrecht, Pierce, Tarr, & Tanaka, 2009; Corcoran, Hundhammer, & Mussweiler, 2009).

What can the individual do?	What can the organization do?
1. **Seek out and elect to participate in diversity training seminars.** Judges and court staff could seek out and participate in diversity training seminars that promote an appreciation of group differences and multicultural viewpoints. Exposure to the multiculturalism approach, particularly routine exposure, will help individuals develop the greater social awareness needed to overcome implicit biases.	1. **Provide routine diversity training.** Offer educational credits for voluntary judicial participation in elective diversity or multiculturalism seminars. Levinson (2007) also suggests that this could be a valuable process for jurors. Recruit a judge to help conduct the training or sit on the panel. In this training, lead by example. Any highly esteemed judge could serve as a role model in this context to promote egalitarian goals.
2. **Seek out the company of other professionals who demonstrate egalitarian goals.** Surrounding oneself with others who are committed to greater egalitarianism will help positively influence one's own implicit beliefs and behaviors in the long run.	2. **Target leadership in the jurisdiction first.** Egalitarian behavior demonstrated by judicial leaders can serve to encourage greater adherence to egalitarian goals throughout the court community. The Judicial Focus Group argued that systemic change only occurs with buy-in from leadership – an essential step toward improved egalitarianism.
3. **Invest extra effort into identifying the unique attributes of stigmatized group members.** Judges and court staff could think about how the stigmatized group members they encounter are *different* from others – particularly from other members of the same social/racial group. This type of individuating exercise will help reduce one's reliance on social or racial stereotypes when evaluating or interacting with another person.	Note: See *Strategy 7* for more suggestions on what an organization can do to cultivate more egalitarian norms in the court community.

Strategy 3: **Routinely check thought processes and decisions for possible bias.**

Helping Courts Address Implicit Bias: Resources for Education, Appendix G

Individuals interested in minimizing the impact of implicit bias on their own judgment and behaviors should actively engage in more thoughtful, deliberative information processing. When sufficient effort is exerted to limit the effects of implicit biases on judgment, attempts to consciously control implicit bias can be successful (Payne, 2005; Stewart & Payne, 2008).

To do this, however, individuals must possess a certain degree of self-awareness. They must be mindful of their decision-making processes rather than just the results of decision making (Seamone, 2006) to eliminate distractions, to minimize emotional decision making, and to objectively and deliberatively consider the facts at hand instead of relying on schemas, stereotypes, and/or intuition (see "Understanding Risk Factors").

Instructions on how to correct for implicit bias may be effective at mitigating the influence of implicit bias on judgment if the instructions implement research-based techniques. Instructions should detail a clear, specific, concrete strategy that individuals can use to debias judgment instead of, for example, simply warning individuals to protect their decisions from implicit bias (e.g., Mendoza, Gollwitzer, & Amodio, 2010; Kim, 2003). For example, instructions could help mitigate implicit bias by asking judges or jurors to engage in mental perspective-taking exercises (i.e., imagine themselves in the other person's shoes; Galinsky & Moskowitz, 2000).

As discussed in Strategy 2, however, some seemingly intuitive strategies for counteracting bias can, in actuality, produce some unintended negative consequences. Instructions to simply suppress existing stereotypes (e.g., adopt the "color blindness" approach) have been known to produce a "rebound effect" that may increase implicit bias (Macrae, Bodenhausen, Milne, & Jetten, 1994). Others also perceive individuals instructed to implement the "color blindness" approach as more biased (Apfelbaum, Sommers, & Norton, 2008). For these reasons, decision makers should apply tested intervention techniques that are supported by empirical research rather than relying on intuitive guesses about how to mitigate implicit bias.

What can the individual do?	What can the organization do?
1. **Use decision-support tools.** Legal scholars have proposed several decision-support tools to promote greater deliberative (as opposed to intuitive) thinking (Guthrie, Rachlinski, & Wistrich, 2007). These tools, while untested, would primarily serve as vehicles for research-based decision-making approaches and self-checking exercises that demonstrably mitigate the impact of implicit bias. The Judicial Focus Group (JFG) also supported the use of such tools, which include: a. **Note-taking.** Judges and jurors should take notes as the case progresses so that they are not forced to rely on memory (which is easily biased; see *Understanding Risk Factors* and Levinson, 2007) when reviewing the evidence and forming a decision. b. **Articulate your reasoning process (e.g., opinion writing).** By prompting decision makers to document the reasoning behind a decision in some way before announcing it, judges and jurors may review their reasoning processes with a	1. **Develop guidelines that offer concrete strategies on how to correct for implicit bias.** Courts could develop and present guidelines to decision makers on how to check for and correct for implicit bias. These guidelines should specify an explicit, concrete strategy for doing so that has been empirically shown to reduce the effects of implicit bias on judgment and behavior. Some research-based strategies could include instructions that walk people through a perspective-taking exercise (Galinsky & Moskowitz, 2000) or a cloaking exercise (i.e., checking decisions for bias by imagining how one would evaluate the stigmatized group member if he or she belonged to a different, non-stigmatized social group), or that direct people to adopt specific implementation intentions to control for potential bias in specific instances (e.g., if-then plans such as *if: encounter a stigmatized group member, then: think counter-stereotypic thoughts*; see Mendoza, Gollwitzer, & Amodio, 2010). It should NOT instruct a person to ignore or suppress stereotypes and/or implicit biases or offer any other intervention technique that

G-8

is not supported by empirical literature on implicit bias.

2. **Institute formal protocols or develop decision-support tools for guidance.** Courts could establish "best practice" protocols or self-checking procedures (e.g., perspective-taking, cloaking; see above) to help judges identify and override implicit bias. The judiciary could also develop protocols to help minimize situational ambiguity (see *Understanding risk factors* for more on situational ambiguity and *Strategy 5* for further discussion about strategies that may be used to reduce ambiguity).

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critical eye for implicit bias before publicly committing to a decision. Techniques or tools that help decision makers think through their decision more clearly and ensure that it is based on sound reasoning before committing to it publicly will protect them from rationalizing decisions *post hoc* (also see *Strategy 6* on instituting feedback mechanisms). Sharing this reasoning up front with the public can also positively affect public perceptions of fairness.

c. **Checklists or bench cards.** The JFG suggested the use of checklists or bench cards that list some "best practice" questions or exercises (e.g., perspective-taking, cloaking). These tools could prompt decision makers to more systematically reflect on and scrutinize the reasoning behind any decision for traces of possible bias. Note that this strategy should be used only after the decision maker has received implicit bias and diversity training, and should be offered for voluntary use. If untrained judges rely on these tools, their efforts to correct for bias may be sporadic and restricted to isolated cases. If resistant judges are compelled to use these tools, checklists as a forced procedure could backfire and actually increase biases in these types of individuals.

Strategy 4: **Identify distractions and sources of stress in the decision-making environment and remove or reduce them.**

Decision makers need enough time and cognitive resources to thoroughly process case information to avoid relying on intuitive reasoning processes that can result in biased judgments (see *Understanding Risk Factors*).

What can the individual do?	What can the organization do?
1. **Allow for more time on cases in which implicit bias may be a concern.** The Judicial Focus Group (JFG) suggested that judges prepare more in advance of hearings in which disadvantaged group members are involved (as attorneys, defendants/litigants, victims,	1. **Conduct an organizational review.** An organizational review could help the court determine whether and how the court fosters bias. Part of this review should include a critical assessment of the burden on judges and other decision makers.

key witnesses). If possible, judges could slow down their decision-making process by spending more time reviewing the facts of the case before committing to a decision. If implicit bias is suspected, judges could reconvene and review case material outside of the court environment to reduce time pressure.

2. **Clear your mind and focus on the task at hand.** Judges should become adept at putting distractions aside and focusing completely on the case and evidence at hand. Meditation courses may help judges develop or refine these skills (Kang & Banaji, 2006; Seamone, 2006).

Some stressors that could adversely affect judicial performance include time pressure (as a result of heavy caseloads, complex cases, or dockets with a broad array of case types), fatigue (as a result of long hours, threats to physical safety, or other emergency or crisis situations), and distractions (as a result of multi-tasking, overburdened workloads, or even loud construction noise that day). Courts could modify procedures to allow judges sufficient time to consider each case by, for example, reorganizing the court calendar to reduce the typical caseload for each judge, minimizing the necessity for spur-of-the-moment decisions, or permitting the judge to issue tentative decisions or reconvene if further deliberation is necessary (e.g., see Guthrie, Rachlinski, & Wistrich, 2007).

Strategy 5: Identify sources of ambiguity in the decision-making context and establish more concrete standards before engaging in the decision-making process

Situational ambiguity may arise for cases in which the formal criteria for judgment are somewhat vague (e.g., laws, procedures that involve some degree of discretion on behalf of the decision maker). These especially include (but are not limited to) cases that involve the interpretation of newly established laws or case types that are unfamiliar or less familiar to the decision maker. In these cases, decision makers should preemptively commit to specific decision-making criteria (e.g., the importance of various types of evidence to the decision) *before* hearing a case or reviewing evidence to minimize the opportunity for implicit bias (Uhlmann & Cohen, 2005). Establishing this structure before entering the decision-making context will help prevent constructing criteria after the fact in ways biased by implicit stereotypes but rationalized by specific types of evidence (e.g., placing greater weight on stereotype-consistent evidence in a case against a black defendant than one would in a case against a white defendant).

What can the individual do?	What can the organization do?
1. **Preemptively commit to more specific decision-making criteria.** Before entering into a decision-making context characterized by ambiguity or that permits greater discretion, judges and jurors could establish their own informal structure or follow suggested protocol (if instituted) to help create more objective structure in the decision-making process. Commit to these decision-making criteria before reviewing case-specific information to minimize the impact of implicit bias on the reasoning process.	1. **Institute formal protocol to help decision makers.** The court could establish and institute formal protocols that decision makers could follow to help them identify sources of ambiguity and that offer suggestions on how to reduce these types of ambiguity in the decision-making context. 2. **Specialization.** The Judicial Focus Group (JFG) discussed the possibility that case decisions by judges with special expertise in that particular area of law may be less prone to implicit bias than decisions made by judges without such expertise. They reasoned

that without familiarity, there is greater ambiguity and uncertainty in decision making. However, the JFG also discussed how this could be a double-edged sword: Specialist judges may be on autopilot with familiar case types and may not be engaged in the kind of deliberative thinking that helps reduce the impact of implicit bias on judgment. To prevent "autopilot" stereotyping, specialist judges in particular should commit to thinking deliberatively (see Strategy 3 for some suggestions on how to check decisions and thought processes for possible bias).

Strategy 6: Institute feedback mechanisms.

Providing egalitarian consensus information (i.e., information that others in the court hold egalitarian beliefs rather than adhere to stereotypic beliefs) and other feedback mechanisms can be powerful tools in promoting more egalitarian attitudes and behavior in the court community (Sechrist & Stangor, 2001). To encourage individual effort in addressing personal implicit biases, court administration may opt to provide judges and other court professionals with relevant performance feedback. As part of this process, court administration should consider the type of judicial decision-making data currently available or easily obtained that would offer judges meaningful but nonthreatening feedback on demonstrated biases. Transparent feedback from regular or intermittent peer reviews that raise personal awareness of biases could prompt those with egalitarian motives to do more to prevent implicit bias in future decisions and actions (e.g., Son Hing, Li, & Zanna, 2002). This feedback should include concrete suggestions on how to improve performance (cf. Mendoza, Gollwitzer, & Amodio, 2010; Kim, 2003) and could also involve recognition of those individuals who display exceptional fairness as positive reinforcement.

Feedback tends to work best when it (a) comes from a legitimate, respected authority, (b) addresses the person's decision-making *process* rather than simply the decision *outcome*, and (c) when provided *before* the person commits to a decision rather than *afterwards*, when he or she has already committed to a particular course of action (see Lerner & Tetlock, 1999, for a review). Note, however, that feedback mechanisms which apply coercive pressure to comply with egalitarian standards can elicit hostility from some types of individuals and fail to mitigate implicit bias (e.g., Plant & Devine, 2001). By inciting hostility, these imposed standards may even be counterproductive to egalitarian goals, generating backlash in the form of increased explicit and implicit prejudice (Legault, Gutsell, & Inzlicht, 2011).

What can the individual do?	What can the organization do?
1. **Actively seek feedback from others.** Judges can seek out their own informal "checks and balances" by organizing or participating in sentencing round tables, or by consulting with a skilled mentor or senior judge for objective feedback on how to handle a challenging case or difficult situation.	1. **Adopt a peer-review process.** Judges could benefit from additional feedback about possible bias in their judicial performance. The court could arrange to have judges observe and provide feedback to one another on a rotating schedule. Guthrie, Rachlinski, and Wistrich (2007) offered a more formal approach: Every 2-3 years, an experienced team of reviewers (comprised of peer judges) could

2. **Actively seek feedback from others regarding past performance.** With an open mind, judges and court staff could talk to colleagues, supervisors, or others to request performance feedback. This information could be helpful in determining whether a person's current efforts to control or reduce implicit bias are effective or could be improved.

3. **Articulate your reasoning process.** To ensure sound reasoning in every case, judges could choose to document or articulate the underlying logic of their decisions. Not only does this exercise afford judges the opportunity to critically review their decision-making processes in each case, but taking it a step further—making this reasoning transparent in court—can have positive effects on public perceptions of fairness (see *Articulate your reasoning process in Strategy 3*, above).

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visit the court and for each judge at that court, the team would review the transcripts, rulings, and other material for a few past cases. The team would then provide each judge with performance feedback and suggestions, if necessary, for improvement. The team should be trained to deliver this feedback in a constructive, non-threatening way.

2. **Develop a bench-bar committee.** The Judicial Focus Group (JFG) also suggested that courts develop a bench-bar committee, which could oversee an informal internal grievance process that receives anonymous complaints about judicial performance in the area of racial and ethnic fairness. Similar to the peer review process mentioned above, this committee (or a select group of trained peer or mentor judges) could review a sample of past cases or observe workplace behavior and offer feedback and guidance to the judge.

3. **Hold sentencing round tables.** The JFG suggested that judges convene a sentencing round table to review hypothetical cases involving implicit bias. Prior to the round table, the judges review the hypothetical cases and arrive prepared to discuss the sentencing decision they would issue in each case. When they convene, all judges reveal their decisions and discuss their reasoning frankly and candidly. This process can help judges think more deliberately about the possibility of implicit biases entering their decisions and offers a forum for judges to obtain feedback from peers.

***Strategy 7*: Increase exposure to stigmatized group members and counter-stereotypes and reduce exposure to stereotypes.**

Increased contact with counter-stereotypes—specifically, increased exposure to stigmatized group members that contradict the social stereotype—can help individuals negate stereotypes, affirm counter-stereotypes, and "unlearn" the associations that underlie implicit bias. "Exposure" can include imagining counter-stereotypes (Blair, Ma, & Lenton, 2001), incidentally observing counter-stereotypes in the environment (Dasgupta & Greenwald, 2001; Olson & Fazio, 2006), engaging with counter-stereotypic role models (Dasgupta & Asgari, 2004; Dasgupta & Rivera, 2008) or extensive practice making counter-stereotypic associations (Kawakami, Dovidio, Moll, Hermsen, & Russin, 2000).

For individuals who seek greater contact with counter-stereotypic individuals, such contact is more effective when the counter-stereotype is of at least equal status in the workplace (see Pettigrew & Tropp, 2006). Moreover, positive and meaningful interactions work best: Cooperation is one of the most powerful forms of debiasing contact (e.g., Sherif, Harvey, White, Hood & Sherif, 1961).

Helping Courts Address Implicit Bias: Resources for Education, Appendix G

In addition to greater contact with counter-stereotypes, this strategy also involves decreased exposure to stereotypes. Certain environmental cues can automatically trigger stereotype activation and implicit bias. Images and language that are a part of any signage, pamphlets, brochures, instructional manuals, background music, or any other verbal or visual communications in the court may inadvertently activate implicit biases because they convey stereotypic information (see Devine, 1989; Rudman & Lee, 2002; Anderson, Benjamin, & Bartholow, 1998; for examples of how such communications can prime stereotypic actions and judgments; see also Kang & Banaji, 2006). Identifying these communications and removing them or replacing them with non-stereotypic or counter-stereotypic information can help decrease the amount of daily exposure court employees and other legal professionals have with the types of social stereotypes that underlie implicit bias.

What can the individual do?	What can the organization do?
1. **Imagine counter-stereotypes or seek out images of admired exemplars.** To reduce the impact of implicit bias on judgment, judges and court staff could imagine or view images of admired or counter-stereotypic exemplars of the stereotyped social group (e.g., Martin Luther King, Jr.) before entering a decision-making scenario that could activate these social stereotypes. To accomplish this, researchers on implicit bias have suggested that people hang photos or program screen savers and desktop images of role models or others that challenge traditional racial stereotypes.	1. **Conduct an organizational review.** An organizational review could help the court determine whether and how the court fosters bias. Part of this review should include an assessment of court communications (visual and auditory) to identify all communications in the courthouse that convey stereotypic information. Change these communications to convey egalitarian norms and present examples of counter-stereotypes. These positive cues can serve as subtle reminders to judges and court staff that reinforce a culture of equality.
2. **Seek greater contact with counter-stereotypic role models.** Individuals who are motivated to become more egalitarian could also spend more time in the presence of people who are counter-stereotypic role models to reinforce counter-stereotypic associations in the brain and make traditional stereotypes less accessible for use.	2. **Follow equal-opportunity and affirmative action (EOAA) hiring practices.** Members of stigmatized groups, when fairly represented in valued, authoritative roles (Richeson & Ambady, 2003), offer opportunities to foster positive intergroup relations and present other judges with readily accessible counter-stereotypes that they can draw upon to reduce implicit bias.
3. **Practice making counter-stereotypic associations.** Individuals who are motivated to change their automatic reactions should practice making positive associations with minority groups, affirming counter-stereotypes, and negating stereotypes. Implicit biases may be "automatic," but corrective and debiasing strategies can also become automated with motivation and practice.	

G-3 Combating Implicit Bias in the Courts: Understanding Risk Factors

Selected Research Findings

Risk factor: **Certain emotional states**

Cited Source	Major Research Findings	Implications
Dasgupta, N., DeSteno, D., Williams, L., & Hunsinger, M. (2009). Fanning the flames of prejudice: The influence of specific incidental emotions on implicit prejudice. *Emotion, 9,* 585-591.	Three studies examined the impact of incidental emotions (i.e., emotions aroused by sources irrelevant to the task at hand) on social judgment. One study showed that when experiencing these emotional states, individuals could develop implicit biases about newly encountered outgroups (i.e., people identified as belonging to different social categories from oneself). For known groups, two studies showed that the presence of incidental emotions increased implicit bias, as measured by the IAT. However, participants only responded with increased bias if the experienced emotion (e.g., anger) was linked with the cultural stereotype about the particular outgroup (e.g., Arabs) to which the evaluated figure belonged.	Emotional states, regardless of the source of those emotions, may create or enhance implicit bias toward other social groups. People may rely more on heuristics (i.e., cognitive shortcuts like stereotypes) when experiencing certain emotional states. Resulting judgments may be more punitive and stereotype-consistent than judgments made in absence of these emotional states. For judges and other legal decision-makers, incidental emotions unrelated to the case at hand could be particularly insidious because they may be misattributed to elements of the case. These emotional experiences may then be interpreted as "intuition" or "gut feelings" about a case that could result in or help to justify a biased decision.
DeSteno, D., Dasgupta, N., Bartlett, M., & Cajdric, A. (2004). Prejudice from thin air: The effect of emotion on automatic intergroup attitudes. *Psychological Science, 15,* 319-324.	Two experiments demonstrated that certain emotional states (arguably, those relevant to intergroup competition and conflict) can evoke "automatic" prejudice toward previously unknown outgroups (i.e., new groups for which no preexisting cultural stereotypes exist). Participants induced to experience anger, but not those induced to experience sadness or a neutral emotional state, demonstrated implicit bias against outgroup members using two different implicit measures.	
Bodenhausen, G., Kramer, G., & Susser, K. (1994). Happiness and stereotypic thinking in social judgment. *Journal of Personality and Social Psychology, 66,* 621-632.	Across four experiments, participants induced to feel happy rendered more stereotypic judgments than participants in a neutral mood. Researchers investigated whether this result could be explained by a higher level of distraction on the part of those induced to feel happy (relative to those in a neutral mood) but found no evidence of such a difference, eliminating this alternative explanation for mood effects. Researchers did find, however, that happy participants could correct for this affect-related bias when held accountable for their judgments.	Happiness can prompt superficial processing and a greater reliance on stereotypes when formulating judgments, but this occurs at a level that can be consciously controlled if the person is motivated to do so.

Helping Courts Address Implicit Bias: Resources for Education, Appendix G

Risk factor: **Ambiguity**

Selected Source	Major Research Findings	Implications
Dovidio, J., & Gaertner, S. (2000). Aversive racism and selection decisions: 1989 and 1999. *Psychological Science, 11*, 319-323.	In a simulated hiring scenario, participants reviewed and evaluated a job candidate's qualifications for a position as a peer counselor. Each participant was randomly assigned to one of three possible conditions in which they reviewed a candidate with strong, ambiguous, or weak qualifications. Participants did not discriminate against Black applicants compared to White applicants when their qualifications were clearly strong or clearly weak; however, when the decision was more ambiguous, racial bias emerged.	When making decisions in an environment that contains some measure of ambiguity or in which the specific criteria for evaluation are unclear, biased judgments are more likely.
Johnson, J. Whitestone, E., Jackson, L, & Gatto, L. (1995). Justice is still not colorblind: Differential racial effects of exposure to inadmissible evidence. *Personality and Social Psychology Bulletin, 21,* 893-898.	This research examined the effects of introducing damaging yet inadmissible evidence in a criminal case against a White or Black defendant. When no inadmissible evidence was presented, verdict decisions did not vary by defendant race. However, when inadmissible evidence was presented, White participants were more likely to endorse a guilty verdict (but were less likely to think the inadmissible evidence affected their decisions) when the defendant was Black than when the defendant was White.	People tend to experience greater difficulty disregarding information when it supports their social stereotypes than when it does not (e.g., inadmissible evidence).

Risk factor: Salient social categories

Selected Source	Major Research Findings	Implications
Macrae, C., Bodehausen, G., & Milne, A. (1995). The dissection of selection in person perception: Inhibitory processes in social stereotyping. *Journal of Personality and Social Psychology, 69,* 397-407.	In 3 experimental studies, researchers illustrated how social stereotyping processes depend on the social categories that are most salient in a given situation. Participants who viewed a videotape of a Chinese woman eating with chopsticks demonstrated Asian stereotype activation and Female stereotype inhibition, whereas those who viewed a videotape of the same Chinese woman applying makeup showed Female stereotype activation and Asian stereotype inhibition (using implicit reaction time measures).	People can categorize others in a number of different ways, and often do so based on whichever social category (e.g., race, gender, age group) is most salient at that moment. For example, if race is made more salient than gender in a given situation, racial stereotypes are more likely to become activated than gender stereotypes.
Mitchell, J., Nosek, B., & Banaji, M. (2003). Contextual variations in implicit evaluation. *Journal of Experimental Psychology: General, 132,* 455-469.	Across five studies, category salience determined whether or not implicit biases emerged. Instructing White participants to attend to the race when viewing pictures of White men and Black women caused them to exhibit an implicit preference for White over Black. However, instructing them to attend to gender (i.e., to classify the same individuals along a different dimension), they exhibited an implicit preference for Black women and a bias against White men (i.e., implicit gender bias but no implicit racial bias).	The expression of implicit bias may also depend on the particular personal characteristics on which the individual focuses. For example, if race is made more salient than gender in a given situation, a person is more likely to express implicit racial bias (and less likely to express implicit gender bias).
Sommers, S. & Ellsworth, P. (2001). White juror bias: An investigation of prejudice against black defendants in the American courtroom. *Psychology, Public Policy, and Law, 7,* 201-229.	This study of 196 White adults demonstrated that implicit bias is less likely to affect judgments in interracial trials that contain overtly racial issues than in trials without such blatant racial overtones. Mock jurors were more likely to convict a Black defendant in an interracial trial when the criminal act in question was not racially charged than when it was racially charged, were more likely to convict a Black defendant than a White defendant when the case was not racially charged, and demonstrated no difference in conviction rates between Black and White defendants when the case was racially charged. Authors argue that these patterns emerge because most people strive for egalitarianism or at least the appearance of egalitarianism; they work to counteract racial bias if they are made aware of this potential influence on their judgments.	Most Whites attempt to behave in egalitarian ways when making decisions about matters that clearly involve the potential for bias (e.g., racially charged cases). However, when race is made salient in a subtle way, Whites may not be aware of the potential for bias and thus may not attempt to correct for such bias when making judgments.

Risk factor: Low-effort cognitive processing

Selected Source	Major Research Findings	Implications
Bodenhausen, G. (1990). Stereotypes as judgmental heuristics: Evidence of circadian variations in discrimination. *Psychological Science, 1,* 319-322.	Two studies showed that people tend to rely more on social stereotypes as an effort-saving tool at times when they are not at their peak level of mental functioning. Specifically, "morning people" produced more stereotype-consistent judgments about another's personal characteristics (Study 1) and presumed guilt (Study 2) when evaluating that person in the evening (8 PM) vs. morning (9 AM), and vice-versa for "night people."	When people engage in low-effort information processing, they may rely on stereotypes and produce more stereotype-consistent judgments than when engaged in more deliberative, effortful processing.
Bodenhausen, G., & Wyer, R. (1985). Effects of stereotypes in decision making and information processing strategies. *Journal of Personality and Social Psychology, 46,* 267-282.	Two studies illustrated how stereotypes can bias the information-seeking process. Participants read a case file that described a person's transgression (Study 1: a job-related infraction; Study 2: a criminal act) and made judgments about immediate punishment severity, likelihood of recidivism, and punishment severity following recidivism. Participants evaluated the transgression as more likely to recur and as deserving of more severe punishment (for both the initial and future offenses) when the type of transgression matched the cultural stereotype of the minority person than when it did not. Moreover, they tended to recall less crime-relevant information about the person's life circumstances (but more non-diagnostic background information) when the transgression was stereotype-consistent than when it was stereotype-inconsistent. This is presumably because participants needed to think less extensively to understand the information presented when it was consistent with their stereotypes than when it violated their expectations. Participants for whom no stereotype was activated tended to recall the most information and apparently used this information to help formulate their judgments: They made more lenient judgments when favorable information was presented than when it was not.	When decision-makers (judges, attorneys, jurors, the public) rely on stereotypes to help them process information, they tend to formulate inferences about the offender early on in the information-gathering process. These presumptions then guide how effortfully they process later information. People tend to recall more diagnostic information about a person or event when they expect it to clash with existing stereotypes and expectations, but tend not to effortfully process and recall information when they expect it to be stereotype-consistent. However, when stereotypes do not guide information processing, people tend to review all available information and use that information to develop a more comprehensive understanding of events. This, in turn, allows them to produce fairer judgments of the offender.

Darley, J., & Gross, P. (1983). A hypothesis-confirming bias in labeling effects. *Journal of Personality and Social Psychology, 44,* 20-33.	This classic psychology study examined the impact of stereotypes on the judgments of others. Participants learned about a fourth-grade girl named Hannah's performance was ambiguous: She incorrectly answered both hard and easy Hannah and watched a videotape of her taking an oral test. Hannah's questions, but also answered some of each correctly. When asked to estimate the grade level of Hannah's performance, participants who were told that Hannah came from a very poor family rated her performance at or below the fourth grade. However, participants who were told that she came from a very wealthy family rated her performance as significantly above the fourth grade level, despite having watched the exact same videotape.	Stereotypes and expectations can subtly influence our perceptions and the behavior of others in ways that uphold cultural stereotypes. Judges may inadvertently construct their information-gathering approach in a manner that, regardless of the information obtained, confirms the stereotype. Moreover, they may exude nonverbal communications that elicit stereotypic responses and behaviors from stigmatized parties, creating a "self-fulfilling prophecy."
Word, C., Zanna, M., & Cooper, J. (1973). The nonverbal mediation of self-fulfilling prophecies in interracial interaction. *Journal of Experimental Social Psychology, 10,* 102-120.	Seminal research demonstrated how racial bias can produce nonverbal behavior that adversely affects the interpersonal exchange between majority and stigmatized group members – here, in a job interview setting. Study 1 demonstrated that naïve, White job interviewers behaved with less immediacy (i.e., physical proximity), exhibited more frequent speech errors, and ended the interview sooner with Black than with White job applicants. Study 2 examined the performance of White job applicants when treated the same way as Study 1 Black applicants vs. Study 1 White applicants. "Black" treatment caused White applicants to exhibit more nervousness and to perform worse in the interview situation than those who received "White" treatment. These applicants also sat farther away from the interviewer and rated him as less friendly and less competent than those in the "White" treatment condition.	

Helping Courts Address Implicit Bias: Resources for Education, Appendix G

Risk factor: Distracted or pressured decision-making circumstances

Selected Source	Major Research Findings	Implications
Bodenhausen, G., & Lichtenstein, M., (1987). Social stereotypes and information-processing strategies: The impact of task complexity. *Journal of Personality and Social Psychology, 52,* 871-880.	In two studies, participants read information about a hypothetical criminal trial in which the defendant was ethnically nondescript or described as Hispanic. Participants, who had been told at the beginning of the session that they would be asked to formulate judgments of either defendant guilt (a complex task) or aggressiveness (a simpler task), then evaluated the defendant on both guilt and aggressiveness. They also completed a memory test on evidence presented in the criminal trial scenario. Participants who expected to answer the complex judgment question judged the defendant as more guilty and aggressive, and recalled more negative information about him, when he was described as Hispanic than when he was ethnically nondescript. Participants initially charged with the simple task demonstrated no such bias in evaluations or in recalled content.	When people must make complex judgments in a relatively short amount of time, they tend to rely more on stereotypes than when faced with simple judgments or have ample time to formulate their judgments.
Eells, T., & Showalter, C. (1994). Work-related stress in American trial judges. *Bulletin of the American Academy of Psychiatry & the Law, 22,* 71-83.	This study surveyed a sample of 88 judges who completed to the National Judges Health Stress Questionnaire, the Judicial Stress Inventory, and the Brief Report Inventory. Judicial stress correlated positively with case backlog, pressure to move cases, and highly diverse caseloads, and correlated negatively with skill use and control over one's workday.	Heavy caseloads, particularly those that contain highly diverse types of cases, and pressure to resolve these cases are associated with occupational stress that may adversely affect judicial performance.
Gilbert, D., & Hixon, J. (1991). The trouble of thinking: Activation and application of stereotypic beliefs. *Journal of Personality and Social Psychology, 60,* 509-517.	Across two studies, authors examined the impact of "cognitive load" (i.e., distracted or preoccupied mental state in which the perceiver has a limited capacity for information processing) on the activation and application of stereotypes. In this seminal work, cognitive load (induced by requiring participants to complete a second concurrent task that involved the mental rehearsal of an 8-digit number) decreased the likelihood that stereotypes became activated. (However, an extensive body of literature points out methodological flaws that undermine this conclusion and demonstrates that stereotypes do become automatically activated when those stereotypes are relevant to the goals of the perceiver: e.g., Spencer, Fein, Wolfe, Fong, & Dunn, 1998 and see Sherman, Macrae, & Bodenhausen, 2000 for a review). Critically, cognitive load increased the likelihood that stereotypes, once activated, were applied in social judgment.	Once stereotypes become activated, they are more likely to influence judgments if the decision-maker is distracted than not.

Citation		
Hartley, L., & Adams, R. (1974). Effect of noise on the Stroop test. *Journal of Experimental Psychology, 102,* 62-66.	Two studies examined the effects of stress on cognitive performance. Study 1 showed that people who were exposed to stressful auditory stimuli performed more poorly on a task that required greater mental focus (i.e., a Stroop task) than when the same task was performed in a quiet environment. Performance impairment increased with duration of exposure to the environmental stressor (Study 2).	Acute stress can cause people to perform more poorly on tasks that require mental focus and executive control.
Keinan, G. (1987). Decision making under stress: Scanning of alternatives under controllable and uncontrollable threats. *Journal of Personality and Social Psychology, 52,* 639-644.	Across a sample of 101 young to middle aged participants, participants who experienced stress – regardless of whether stress stemmed from a controllable or uncontrollable source – tended to arrive at untimed problem-solving decisions prematurely, without fully considering all alternatives.	Stress appears to limit information sampling and prevent decision-makers from fully considering all available information. People may tend to arrive at premature decisions and may be less vigilant when experiencing stress.
Sherman, J., Lee, A., Bessenoff, G., & Frost, L. (1998). Stereotype efficiency reconsidered: Encoding flexibility under cognitive load. *Journal of Personality and Social Psychology, 75,* 589-606.	Five studies examined the hypothesis that stereotypes are efficient because they facilitate information encoding when cognitive resources are constrained. Studies 1-3 showed that participants attended more to information inconsistent with held stereotypes when cognitive resources were low (e.g., when distracted by a second, concurrent task). Study 4 showed that in both conditions (high and low cognitive resources), participants encoded the perceptual details of stereotype-inconsistent information more than stereotype-consistent information. However, the final study demonstrated that participants with depleted cognitive resources were more likely to extract the conceptual meanings of stereotype-consistent behaviors than stereotype-inconsistent behaviors.	Stereotypes emerge to support more efficient information processing. Information that is inconsistent with held stereotypes receive greater attention and more thorough perceptual encoding in an effort to integrate this seemingly contradictory information with our expectations about the world. However, when processing capacity is low (due to distractions, exhaustion, multi-tasking, etc.), people are more likely to derive meaning from information that is consistent with held stereotypes than from information that is inconsistent.
van Knippenberg, A., Dijksterhuis, A., & Vermeulen, D. (1999). Judgment and memory of a criminal act: The effects of stereotypes and cognitive load. *European Journal of Social Psychology, 29,* 191-201.	Undergraduates judged a defendant's guilt and recommended severity of punishment in a mock criminal case. Participants completed the task in one of four possible conditions, which differed as a function of activated stereotype (positive vs. negative) about the defendant and cognitive load (high vs. low via a time pressure manipulation). Participants with negative activated stereotypes provided higher estimates of the defendant's guilt, more severe punishment, and better memory for incriminating evidence than participants with positive activated stereotypes, but this difference emerged only for participants under high cognitive load.	When pressed for time, decision-makers (e.g., judges, jurors, witnesses) more often rely on stereotypes to help them formulate judgments. By relying on relevant stereotypes, decision-makers may produce more stereotype-consistent judgments and may recall information in a manner biased by those stereotypes.

Risk factor: Lack of feedback and accountability

Selected Source	Major Research Findings	Implications
Neuberg, S., & Fiske, S. (1987). Motivational influences on impression formation: Outcome dependency, accuracy-driven attention, and individuating processes. *Journal of Personality and Social Psychology, 53*, 431-444.	In each of three experiments, participants expected to interact with a young schizophrenic man ("Frank") on a design creativity task and received information about his personal attributes that were either unrelated to or inconsistent with the schizophrenic label. Some participants learned that a desirable outcome (winning $20 for designing the most creative game) depended only on their own contributions (outcome-independent condition), whereas others learned that this outcome depended on both their own and Frank's contributions to the final product (outcome-dependent condition). Outcome-dependent participants (Studies 1 & 2) and participants who simply had the goal to form accurate impressions (Study 3) spent more time reading about Frank's personal attributes and were more likely to base their impressions about Frank on this individuating information, when available, than on the stereotype associated with the schizophrenic label.	Accountability may motivate people to think more deliberatively and formulate more accurate evaluations of others in some cases.
Tetlock, P. (1983). Accountability and complexity of thought. *Journal of Personality and Social Psychology, 45*, 74-83.	This study surveyed participant attitudes on three controversial social issues after informing them (a) that their responses were anonymous or (b) that they would need to justify their responses to another participant who held either liberal, conservative, or unknown views. The researcher coded each participant response for complexity of reasoning processes. When participants knew the other participant's beliefs in the advance, they simply reported attitudes consistent with the beliefs of the person to whom they were to justify their response (i.e., more liberal when the other held liberal views, compared to participants in the unaccountable condition; more conservative when the other was conservative). Participants who expected to justify their attitudes to another participant with unknown beliefs demonstrated significantly greater thought complexity than participants from any of the other three conditions.	

G-4 Combating Implicit Bias in the Courts: Seeking Change

Selected Research Findings

Strategy 1: **Raise awareness of implicit bias.**

Selected Source	Major Research Findings	Implications
Green, A., Carney, D., Pallin, D., Ngo, L., Raymond, K., Iezzoni, L., & Banaji, M. (2007). Implicit bias among physicians and its prediction of thrombolysis decisions for black and white patients. *Journal of General Internal Medicine, 22,* 1231-1238.	Researchers examined physician decision-making in response to a clinical vignette for evidence of racial bias. Although these physicians reported no explicit racial prejudice, physicians demonstrated an implicit preference for White Whites over Blacks and an implicit stereotype of Blacks as less cooperative (in general and specifically with medical procedures) than Whites on IAT measures. Implicitly biased physicians were less likely to recommend thrombolysis as a treatment when the patient in the vignette was described as Black than when the patient was described as White. Interestingly, 67 physicians were excluded from this analysis for reporting some awareness of the nature of the study. These "aware" physicians were *more* likely to recommend thrombolysis for Black patients as their implicit biases increased. Thus, this awareness did seem to prompt physicians to control for racial bias in their medical decisions.	Implicit racial biases can affect decision-making of expert professionals in the medical field, causing a tendency for White physicians to recommend disparate treatments for White vs. Black patients in a manner biased by their racial stereotypes. However, physicians aware of this type of bias did not exhibit the same discrepancy. Awareness about possible implicit biases may help professionals control for its effects on decision-making.
Kim, D. (2003) Voluntary controllability of the implicit association test (IAT). *Social Psychology Quarterly, 66,* 83-96.	In two studies, participants did not spontaneously correct for their implicit biases on IATs and were incapable of misrepresenting their preferences on the tests when asked to suppress their bias. However, participants could reduce biased IAT scores if explicitly instructed on *how* to do so (i.e., to respond more slowly toward the subset of stimuli known to have a positive cultural association). Only when instructed on how to alter their implicit bias scores were these participants able to appear pro-Black instead of pro-White on the race IAT (Study 2).	Instructions that explicitly detail a concrete strategy for counteracting implicit bias can mitigate the effects of the bias on behavior. However, instructions that fail to sufficiently explain a concrete intervention strategy are not effective.
Wilson, T. D., & Brekke, N. (1994). Mental contamination and mental correction: Unwanted influences on judgments and evaluations. *Psychological Bulletin, 116,* 117-142.	In this seminal review and reconceptualization of the research literature on mental contamination (defined as "the process whereby a person has an unwanted response because of mental processing that is unconscious or uncontrollable"), these authors argued that mental contamination is "difficult to avoid because it results from both… a lack of awareness of mental processes… and faulty lay beliefs about the mind" (p. 117).	People only take steps to correct for bias if they believe bias exists. The steps they do take in response to known biases are guided by their lay theories (which may be faulty) about how the bias operates.

Strategy 2: Acknowledge group and individual differences.

Cited Source	Major Research Findings	Implications
Aarts, H., Gollwitzer, P., & Hassin, R. (2004). Goal contagion: Perceiving is for pursuing. *Journal of Personality and Social Psychology, 87*, 23-37.	Six experimental studies provide evidence that individuals may nonconsciously mimic the goals of others. Studies 1-3 show that participants automatically adopted and pursued a goal implied in the observed behavior of another. However, Studies 4-6 show that "automatic goal pursuit" occurs only when the observed goal pursuit was deemed appropriate and, therefore attractive.	If socially valued judges and court staff members model egalitarian goal pursuit, this overt egalitarianism may be "contagious." Other judges and court staff members may automatically engage in egalitarian behaviors simply by observing the egalitarian behaviors of role models.
Apfelbaum, E., Sommers, S., & Norton, M. (2008). Seeing race and seeming racist? Evaluating strategic colorblindness in social interaction. *Journal of Personality and Social Psychology, 95*, 918-932.	Across four studies, authors reported evidence that the colorblindness approach to minimizing the appearance of bias in race-relevant social interactions (i.e., avoidance of race and race-relevant discussion) backfires. White individuals who implemented this strategy actually produced more negative nonverbal behavior (i.e., less nonverbal friendliness; Study 1). Study 2 provides evidence for why this occurs: The colorblind strategy decreases individuals' capacity to exert inhibitory control over their own nonverbal behaviors by diverting these mental resources to the task of ignoring race. In Study 3, White observers with higher *external* motivation (i.e., motivated by social standards and conformity pressures) to respond without prejudice tended to view actors who implemented the colorblind strategy more favorably, and consider them less prejudiced, than actors who implemented a race-acknowledging strategy. Alternatively, Black observers and White observers who were more *internally* motivated (i.e., motivated by internalized, personal standards) to respond without prejudice reported the opposite reaction: They tended to view the colorblind actor as more prejudiced than the race-acknowledging actor in interracial interactions. However, actors who talked about and acknowledged race when race was not seen as immediately relevant were viewed as more prejudiced by all by both White and Black observers than actors who ignored race (Study 4).	Whites who use the colorblind strategy in their attempts to appear unbiased actually exhibit more negative nonverbal behaviors and, thus, more implicit bias. For social interactions in which race is relevant, White observers who are *internally* motivated to respond without prejudice and Black observers both see colorblind-strategy users as more prejudiced than individuals who implement a race-acknowledging strategy, but White observers who are only *externally* motivated to respond without prejudice like colorblind-strategy users more and erroneously view colorblind-strategy users as less prejudiced than individuals who acknowledge race.

Reference	Description
Corcoran, K., Hundhammer, T., & Mussweiler, T. (2009). A tool for thought! When comparative thinking reduces stereotyping effects. *Journal of Experimental Social Psychology, 45,* 1008-1011.	Participants in two studies were primed to focus on differences or similarities (by first completing a task in which they had to compare sketches of two scenes for differences vs. similarities). Participants primed to focus on differences sat closer to a chair ostensibly occupied by a stereotypical "skinhead" (Study 1) and attributed less gender-stereotypic skills to a hypothetical job candidate (Study 2) than participants primed to focus on similarities.
Djikic, M., Langer, E., & Stapleton, S. (2008). Reducing stereotyping through mindfulness: Effects on automatic stereotype-activated behaviors. *Journal of Adult Development, 15,* 106-111.	Langer (1978, 1989, 1997, 2005) describes mindfulness as "a state in which individuals continually make novel distinctions about objects of their attention." Although mindfulness may reduce explicit prejudice (see Langer, Bashner, & Chanowitz, 1985), Langer and colleagues sought to determine whether mindfulness could override implicit forms of bias. Participants in this study viewed and categorized a set of photographs of the elderly four times by age only, by gender only, by four different assigned categories (age, gender, attractiveness, race), or by four different self-generated categories. Similar to the now-classic Bargh, Chen, & Burrows (1996) study on the influence of automaticity on behavior, Langer and colleagues measured participants' walking speed following the categorization task and found that conditions Langer felt produced greater mindfulness (categorizing four different ways) predicted faster moving speed than less mindful conditions (categorizing one way four times), reflecting less age-related stereotype expression.
Lebrecht, S., Pierce, L., Tarr, M. & Tanaka, J. (2009). Perceptual other-race training reduces implicit racial bias. *PLoS ONE, 4,* e4215.	Participants either categorized photos of African American faces as African American or not, or learned to discriminate between several different African American faces. Participants in the latter (individuation) condition exhibited less implicit bias than participants in the former (racial categorization) condition.

Judges and jurors may override implicit bias in behavior and judgment by engaging in a more open, inquisitive, deliberative approach to information processing in which they consider various individuating attributes of stigmatized group members rather than focusing on their membership in a stigmatized category.

Citation	Description	Summary
Levinson, J. D. (2007). Forgotten racial equality: Implicit bias, decisionmaking, and misremembering. *Duke Law Journal, 57*, 345-424.	The author draws on social science research and presents a study with judges and jurors to demonstrate that implicit biases affect how these legal decision-makers process and recall case-related information. Specifically, participants were more likely to recall certain facts of the case when they were stereotype-consistent (i.e., aggressive behavior from an African-American character) than when they were not (i.e., same behavior from a Caucasian character). The author concludes with several applied suggestions for how to mitigate or eliminate the effect of implicit biases in judgment and decision-making.	Implicit bias affects how judges and jurors process new information and how they recall information. However, some strategies or decision-support tools could be developed based on the social science literature to help mitigate these effects.
Plant, A., & Devine, P. (2001). Responses to other-imposed pro-black pressure: Acceptance or backlash? *Journal of Experimental Social Psychology, 37*, 486-501.	Three studies demonstrated that imposed pressure to comply with egalitarian standards, regardless of whether that pressure was real (Study 3) or simply perceived (Studies 1 & 2), elicited hostile backlash in participants' attitudes and behavior amongst those who are primarily *externally* motivated to respond without prejudice (i.e., those with low internal motivation). Thus, although forced accountability may elicit initial compliance from those with low internal motivation, these studies show that these individuals may lash out, presumably in an attempt to reassert their personal freedom.	External motivators to respond without prejudice, such as mandatory diversity training and enforced accountability mechanisms, can elicit hostile resistance and fail to reduce prejudice amongst individuals who possess low internal motivation to do so.
Richeson, J., & Nussbaum, R. (2004). The impact of multiculturalism versus color-blindness on racial bias. *Journal of Experimental Social Psychology, 40*, 417-423.	Participants read a one-page statement that endorsed either a multicultural ideology (in which racial differences are highlighted and construed in a positive light) or a colorblindness perspective (in which people are told to ignore race) as an approach to reducing interethnic tension. Afterwards, they were asked to provide five reasons why the approach they read about was a positive one in combating bias prior to taking the IAT. Participants in the colorblind condition displayed greater racial bias on explicit and implicit measures than those exposed to a message advocating multiculturalism.	Anti-bias messages work if presented from a multicultural perspective that construes racial differences in a positive light, but not a color-blindness perspective in which people strive (and fail) to ignore race.
Rudman, L., Ashmore, R., & Gary, M. (2001). "Unlearning" automatic biases: The malleability of implicit prejudice and stereotypes. *Journal of Personality and Social Psychology, 81*, 856-868.	Across two studies, participants who enrolled in and attended a voluntary interethnic diversity course showed less implicit and explicit racial biases compared to those who did not attend the diversity course.	Elective multicultural diversity training can reduce racial stereotyping and implicit bias.

Sechrist, G., & Stangor, C. (2001). Perceived consensus influences intergroup behavior and stereotype accessibility. *Journal of Personality and Social Psychology, 80,* 645-654.	In two empirical studies, Whites' implicit beliefs about Blacks became less stereotypic if they discovered that their peer group was more egalitarian than themselves compared to a situation in which they had no information about peer opinion. However, their beliefs became more stereotypic if they discovered that their peer group was less egalitarian than themselves compared to no information controls.	Readily available consensus information guides individual behavior. Cultivating a workplace environment that supports egalitarian norms can reduce individual-level implicit bias.

Strategy 3: Routinely check thought processes and decisions for possible bias.

Selected Source	Major Research Findings	Implications
Apfelbaum, Sommers, & Norton (2008)	See *Strategy 2.*	See *Strategy 2.*
Galinsky, A., & Moskowitz, G. (2000). Perspective-taking: Decreasing stereotype expression, stereotype accessibility, and in-group favoritism. *Journal of Personality and Social Psychology, 78,* 702-724.	Three studies explored perspective-taking (i.e., imagining how one would feel and act if one was in another person's shoes or seeing the world from another person's point of view) as a strategy for controlling stereotype activation. Compared with the stereotype suppression strategy, studies 1 and 2 showed that perspective-taking decreased stereotypic biases on explicit (essay content) and implicit (reaction time) measures. Study 3 showed that perspective-taking also produced more favorable attitudes and evaluations of outgroup members, reducing implicit bias.	By providing judges and jurors with specific instructions to engage in perspective-taking, they may successfully override implicit bias.
Guthrie, C., Rachlinski, J., & Wistrich, A. (2007). Blinking on the bench: How judges decide cases. *Cornell Law Review, 93,* 101-141.	Authors review and contrast the concepts of intuitive thinking vs. deliberative thinking, illustrate the tendency of judges to rely on intuitive rather than deliberative, deductive reasoning, and discuss strategies and decision-making tools that could be used to promote greater deliberative thought and prevent faulty intuitive thought processes from contaminating judgments. The authors report data to support their conclusion that judges are not exempt from these pitfalls: Like the majority of people, judges overwhelmingly tended to use three heuristics common in intuitive reasoning that result in faulty judgments (anchoring, representativeness, and hindsight biases). They discuss and support the use of tools that induce or facilitate greater deliberative thinking, such as more time, opinion writing, training and feedback, scripts or checklists, and the reallocation of decision-making authority between more than one judge.	Intuitive modes of processing are highly susceptible to an array of decision-making biases (beyond just implicit bias). Decision-support tools of various types could help judges redirect their mode of thinking to foster greater cognizance and deliberative processing, which can help judges bypass these pitfalls.
Kim (2003)	See *Strategy 1.*	See *Strategy 1.*
Levinson (2007)	See *Strategy 2.*	See *Strategy 2.*

Macrae, C., Bodenhausen, G., Milne, A., & Jetten, J. (1994). Out of mind but back in sight: Stereotypes on the rebound. *Journal of Personality and Social Psychology, 67*, 808-817.	Three studies provide evidence that stereotype suppression produces a rebound effect that results in even more pejorative evaluations of and behavioral reactions to stereotyped targets, relative to stereotype users. Stereotype suppressors (i.e., participants instructed to avoid thinking about the target in a stereotypic manner) included more stereotype-consistent descriptions when hypothesizing about the typical day in the life of a stereotyped target (Studies 1-3) and maintained greater interpersonal distance from the stereotyped target (Study 2) than participants who did not receive suppression instructions. Study 3 showed greater stereotype activation (measured by reaction time) in stereotype suppressors than in stereotype users.	Directing people to suppress their stereotypes can backfire, resulting in greater stereotype activation and more prejudiced thoughts and behaviors than simply allowing people to use stereotypes.
Mendoza, S., Gollwitzer, P., & Amodio, D. (2010). Reducing the expression of implicit stereotypes: Reflexive control through implementation intentions. *Personality and Social Psychology Bulletin, 36*, 512-523.	Across two studies that examined accuracy on the Shooter Task (a computer simulation in which participants are instructed to shoot only armed criminals and not unarmed bystanders; people tend to make rapid decisions to shoot Black people more often than White regardless of whether or not a weapon is present), authors examined the effectiveness of "implementation intentions" as a strategy for reducing or controlling implicit bias. Implementation intentions are planned "if-then" response contingencies that may become automated; the individual foresees some undesirable circumstance (e.g., a specific instance that may evoke implicit bias) and links it with an intended response that is more desirable (e.g., an egalitarian response). Participants in both studies who used such implementation intentions when completing the Shooter Task performed with greater accuracy and exhibited less racial bias.	When judges and jurors are made aware of concrete strategies for overcoming specific instances of racial bias, they can implement those strategies and exert control over stereotyping even at the automatic level. These strategies could be as simple as thinking specific counter-stereotypical thoughts upon encountering a disadvantaged group member.

Citation	Description	Key Finding
Payne, K. (2005). Conceptualizing control in social cognition: How executive functioning modulates the expression of automatic stereotyping. *Journal of Personality and Social Psychology, 89*, 488-503.	Two studies illustrated how efforts at controlling automatic stereotyping may prove effective. Study 1 provided correlational evidence that people with better executive control (defined by the authors as "the capacity to constrain thought processes and behavior to reach goal-relevant ends") on tasks unrelated to social stereotyping also demonstrated greater control and less racial bias on several well-known measures of automatic race bias (i.e., Shooter Task, evaluative priming task, and the IAT); people with poor executive control exhibited greater racial discrimination on these speed tasks. These differences emerged regardless of participants' motivations to respond without prejudice. Moreover, participants with stronger implicit bias formed more negative impressions of a Black person based on a long, multifaceted description (Lambert, Payne, Ramsey, & Shaffer, 2004 showed that these participants evaluated the target more negatively when the description identified him as Black compared to White).	Regardless of a person's motivation to respond without prejudice, those individuals with greater executive control capabilities are less likely to engage in automatic stereotyping than people with poorer executive control.
Stewart, B., & Payne, B. (2008). Bringing automatic stereotyping under control: Implementation intentions as efficient means of thought control. *Personality and Social Psychology Bulletin, 34*, 1332-1335.	Three experiments examined the value of implementation intentions (see Mendoza, Gollwitzer, & Amodio, 2010, above) in overriding implicit bias. Overall, implementation intentions to think "safe" in response to Black faces (instead of experiencing feelings of threat) significantly reduced automatic stereotyping in the Shooter Task (i.e., mitigated the Shooter Bias; Studies 1 & 2) and implicit bias measured by the IAT (Study 3) compared to implementations to think "quick" or think "accurate" (goals already made explicit as the purpose of the Shooter Task).	If people are presented with very concrete instructions that explicitly detail an effective approach to override implicit bias, people's efforts at control can be successful.

Strategy 4: Identify distractions and sources of stress in the decision-making environment and remove or reduce them.

Selected Source	Major Research Findings	Implications
Guthrie, Rachlinski, & Wistrich (2007)	See *Strategy 3*.	See *Strategy 3*.
Kang, J., & Banaji, M. (2006). Fair measures: A behavioral realist revision of 'affirmative action'. *California Law Review, 94*, 1063-1118.	**Review and opinion piece.** See pp. 1096-1098 for a discussion about the benefits of avoiding or changing subtle and obvious environmental cues that trigger stereotypes, particularly as they pertain to the psychological phenomenon known as "stereotype threat." Stereotype threat is the acute, disruptive concern that a negative stereotype about one's group membership will influence how one is evaluated. When cued to the relevant stereotype by environmental or situational factors, this resultant anxiety often causes the individual to exhibit behavior consistent with the negative stereotype, despite one's best efforts at avoiding this undesirable outcome (see Steele & Aronson, 1995). Thus, individuals responding to stereotype threat can evoke stereotypic behaviors. Authors also offer some applied suggestions for how to mitigate the effects of implicit bias on judgment and behavior.	Environmental cues may not only activate stereotypes and facilitate implicit bias amongst Whites or majority group members, but also activate stereotypes and facilitate "stereotype threat" amongst Blacks or other disadvantaged group members.
Seamone, E. R. (2006). Understanding the person beneath the robe: Practical methods for neutralizing harmful judicial biases. *Willamette Law Review, 42*, 1-76.	**Review and opinion piece.** The author offers a critique of the checklist method and suggests several alternative strategies that judges may be able to use to enhance mental focus and self-awareness in a more process-oriented approach to mitigating bias in decision-making.	Judges who use the checklist method may focus more on the results of a biased process (which they may still be able to justify) rather than on debiasing the process itself.

Helping Courts Address Implicit Bias: Resources for Education, Appendix G

Strategy 5: Identify sources of ambiguity and impose greater structure *before* entering the decision-making context.

Selected Source	Major Research Findings	Implications
Uhlmann, E., & Cohen, G. (2005). Constructed criteria: Redefining merit to justify discrimination. *Psychological Science, 16*, 474-480.	Three studies showed that participants tended to assign male and female job applicants to gender-stereotypical positions. These participants inadvertently changed the criteria they felt were necessary to succeed at the gender-stereotypic position to better suit the desired candidate. However, committing beforehand to specific merit criteria for the positions eliminated gender discrimination in hiring a police chief.	Judges who establish and make salient specific decision-making criteria relevant to the case *before* hearing the case or learning any information about the defendants (i.e., judges who focus on debiasing the process rather than trying to debias the outcome) may be better at overcoming the effects of implicit bias.

Strategy 6: Institute feedback and accountability mechanisms.

Selected Source	Major Research Findings	Implications
Guthrie, Rachlinski, & Wistrich (2007)	See *Strategy 3*.	See *Strategy 3*.
Kim (2003)	See *Strategy 3*.	See *Strategy 3*.
Legault, L., Gutsell, J., & Inzlicht, M. (2011). Ironic effects of antiprejudice messages: How motivational interventions can reduce (but also increase) prejudice. *Psychological Science, 22*, 1472-1477.	Authors examined how two strategies for motivating antiprejudiced behavior can have opposing effects. In two studies, participants who received antiprejudice messages that encouraged internal or intrinsic motivation to regulate prejudice (i.e., an antiprejudice message that appealed to personal standards for egalitarianism) exhibited less explicit and implicit prejudice than a control group that did not employ any prejudice-reduction strategy. Alternatively, participants who received antiprejudice messages that employed external or extrinsic motivation to regulate prejudice (i.e., an antiprejudice message indicating that participants should comply with social standards) exhibited more explicit and implicit prejudice than the control group.	The type of motivational appeal used in antiprejudice messages can play a direct role in the effectiveness of that message. Antiprejudice messages that encourage intrinsic motivation can successfully reduce both explicit and implicit prejudice. However, antiprejudice messages that impose extrinsic motivation can backfire, incite hostility, and generate backlash in the form of increased explicit and implicit prejudice.

Reference	Description	Strategy
Lerner, J., & Tetlock, P. (1999). Accounting for the effects of accountability. *Psychological Bulletin, 125*, 255-275.	Reviews an extensive body of empirical research on the effectiveness of accountability in mitigating an array of biases. - When faced with evaluators whose personal beliefs are known, people tend to conform to those beliefs; when the evaluator's beliefs are unknown, people tend to engage in more deliberative thinking. - When accountability mechanisms are instituted after the person has already committed to a course of action (post-decisional), people tend to become defensive in support of their past actions; when they are instituted beforehand (predecisional), it attenuates such commitment. - Accountability for the decision-making process tends to increase deliberative thinking, whereas accountability for the decision outcome tends to increase self-justification. - Accountability demands from legitimate authorities tend to elicit positive responses; demands from authorities perceived to be illegitimate tend to be seen as intrusive/insulting and tend to backfire. Predecisional accountability to a respected audience or evaluator whose personal beliefs are unknown will tend to improve judgment if the demonstrated bias is one that emerges as a result of lazy, effortless, or intuitive thinking processes. This may occur particularly if the accountability focus lies on the decisional process as opposed to outcome.	The success of accountability mechanisms in mitigating social judgment and behavioral biases depends on several factors (including who the evaluator is and whether his or her beliefs are known; at what point the accountability demands were instituted and what those demands emphasize as important). With the confluence of several of these factors, accountability mechanisms can mitigate some types of bias. However, some accountability mechanisms not only fail to attenuate observable bias but may instead exacerbate such bias.
Mendoza, Gollwitzer, & Amodio (2010)	See *Strategy 3.*	See *Strategy 3.*
Plant & Devine(2001)	See *Strategy 2.*	See *Strategy 2.*
Sechrist & Stangor (2001)	See *Strategy 2.*	See *Strategy 2.*
Son Hing, L., Li, W., & Zanna, M. (2002). Inducing hypocrisy to reduce prejudicial response among aversive racists. *Journal of Experimental Social Psychology, 38,* 71-77.	This research made aversive racists (people who are explicitly egalitarian but who still have implicit bias) aware of their past race-based transgressions, increasing their negative affect (guilt/discomfort). These people also allocated more money to a racial minority student club on campus compared to those truly low in implicit bias and compared to aversive racists who were not made aware of their past hypocrisies. Truly low prejudiced participants responded no differently when reminded vs. not reminded of these past acts; their funding allocation decisions were significantly less prejudiced than aversive racists in the same control condition.	Accountability mechanisms that review past performance and provide judges with evidence of possible bias could prompt those with egalitarian motives to exert more conscious control to prevent bias from informing future judgments and behavior.

Strategy 7: Increase exposure to stigmatized group members and counter-stereotypes, and reduce exposure to stereotypes.

Selected Source	Major Research Findings	Implications
Anderson, C., Benjamin, A., Bartholow, B. (1998). Does the gun pull the trigger? Automatic priming effects of weapon pictures and weapon names. *Psychological Science, 9*, 308-314.	Over 40 years of research demonstrates that the mere presence of a weapon in a room increases aggressive behavior. In two studies, the present research demonstrates that this "weapons effect" occurs automatically, increasing the cognitive accessibility of aggression-related thoughts known to influence behavior. In a speeded task, participants responded more quickly to aggressive words than nonaggressive words after viewing weapon-related words (Study 1) and pictures (Study 2) than after exposure to non-weapon stimuli, demonstrating that aggressiveness is indeed more accessible after exposure to weapons-related stimuli.	Given that the cultural stereotype of Blacks associates them with hostility/aggression (see Devine, 1989, below), the prevalence of visible weapons (e.g., worn by courthouse security) or signage about weapons (e.g., "Weapons of Any Kind Prohibited") at the entrance and throughout the courthouse may inadvertently facilitate implicit bias.
Blair, I., Ma, J., & Lenton, A. (2001). Imagining stereotypes away: The moderation of implicit stereotypes through mental imagery. *Journal of Personality and Social Psychology, 81*, 828-841.	Five empirical studies provide convergent evidence that participants who engaged in mental imagery of counter-stereotypes (by following detailed instructions regarding what to imagine) presented substantially weaker implicit biases (as measured by the IAT, other measures of reaction time, signal detection sensitivity, and false recognition judgments) than those who engaged in neutral, stereotypic, or no mental imagery. Moreover, people who engaged in mental imagery of relevant stereotype-consistent information responded with greater implicit biases than those in a neutral imagery condition.	Implicit biases can be controlled. By imagining counter-stereotypes before encountering a situation in which race is or may be an issue, people should be able to reduce the influence of their own implicit biases in social behavior and judgment.
Dasgupta, N. & Asgari, S. (2004). Seeing is believing: Exposure to counterstereotypic women leaders and its effect on the malleability of automatic gender stereotyping. *Journal of Experimental Social Psychology, 40*, 642-658.	Two studies demonstrated that elements of the social environment can undermine (or fuel) implicit biases. Exposure to women in leadership positions (i.e., female professors and deans) decreased implicit gender bias for college-aged women, an effect that was mediated by the frequency with which the participant encountered those female leaders.	Increasing the frequency of exposure to, or increasing the frequency of positive interactions with, counter-stereotypic role models may reduce implicit bias. Environments that do not fairly represent disadvantaged group members in leadership positions can fuel implicit bias.

Citation	Description	Application
Dasgupta, N. & Greenwald, A. (2001). On the malleability of automatic attitudes: Combating automatic prejudice with images of admired and disliked individuals. *Journal of Personality and Social Psychology, 81,* 800-814.	Two experiments demonstrated that exposure to pictures of admired exemplars (e.g., Denzel Washington) of a marginalized group (e.g., Blacks) or disliked exemplars (e.g., Jeffrey Dahmer) of the non-marginalized group (e.g., Whites) significantly decreased implicit bias (as measured by the IAT) towards the disadvantaged group (Blacks in Study 1; the elderly in Study 2).	As one implicit bias intervention strategy, people could increase their daily exposure (through images, video, etc.) to positive exemplars from the disadvantaged group.
Dasgupta, N., & Rivera, L. (2008). When social context matters: The influence of long-term contact and short-term exposure to admired outgroup members on implicit attitudes and behavioral intentions. *Social Cognition, 26,* 54-66.	In this year-long longitudinal study, a short-term situational intervention exposed some participants to counter-stereotypic exemplars of a disadvantaged group (gays & lesbians); a control group did not receive this exposure. Participants who naturally had substantial prior contact with the outgroup showed less discrimination in later voting behaviors regardless of experimental condition. For participants with little prior outgroup contact, those who received the short-term situational intervention were less biased in their voting behaviors than the control group.	For people who have little prior contact with outgroup members, exposure to counter-stereotypic role models can reduce bias. Contact with counter-stereotypic exemplars can produce enduring effects; people showed less bias after receiving only short-term exposure.
Devine, P. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56,* 5-18.	In this seminal work, three studies illustrated how stereotyping and prejudice may in some ways be automatic processes. Study 1 demonstrated that, regardless of personal beliefs, all respondents possessed knowledge of the cultural stereotype of Blacks (e.g., as aggressive, hostile, criminal). Study 3 confirmed that low prejudiced people reported fewer pejorative thoughts about Blacks than high prejudiced people. Study 2 showed that nonconsciously priming participants with words primarily associated with the cultural stereotype of Blacks produced more stereotypic judgments of another, compared to those exposed to racially neutral words; this effect emerged for both high and low prejudiced individuals.	When subtle environmental or situational cues (e.g., words used on signage in and around the courthouse) activate cultural stereotypes, people – regardless of their own explicit beliefs – respond with more stereotypic judgments.
Kang & Banaji (2006)	See *Strategy 4.*	See *Strategy 4.*
Kawakami, K., Dovidio, J., Moll, J., Hermsen, S., & Russin, A. (2000). Just say no (to stereotyping): Effects of training in the negation of stereotypic associations on stereotype activation. *Journal of Personality and Social Psychology, 78,* 871-888.	Three studies provide convergent evidence that extensive practice with countering or negating stereotypes (i.e., saying "NO" in response to stereotype-consistent stimuli) effectively reduces the automatic activation of those stereotypes (as determined by several reaction-time measures) compared with individuals who receive no training or training with an unrelated stereotype category.	Extensively practicing reversed or counter-stereotypic associations can reduce implicit bias by making it less likely that those stereotypes become spontaneously activated.

Citation	Description	Conclusion
Olson, M. & Fazio, R. (2006). Reducing automatically activated racial prejudice through implicit evaluative conditioning. *Personality and Social Psychology Bulletin, 32*, 421-433.	Three studies illustrated one possible mechanism for reducing implicit racial prejudice. Participants, surreptitiously presented with counter-stereotypical pairings (i.e., pictures of Black faces with positive stimuli, White faces with negative stimuli; Study 1), showed less implicit racial bias immediately afterward (Study 2) and 2 days later (Study 3).	People need not be conscious of exposure to counter-stereotypes for this exposure to successfully reduce implicit biases in the short and longer-term.
Pettigrew, T., & Tropp, L. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*, 751-783.	A meta-analysis of 713 independent samples from 515 studies shows that intergroup contact that adheres to Allport's optimal contact conditions typically leads to greater prejudice reduction than other forms of contact, but these conditions are not essential for prejudice reduction to occur. Increased social contact across social groups seems to have a positive effect not only on explicit attitudes but also on implicit ones.	Greater contact with disadvantaged groups can reduce bias against those groups.
Richeson, J., & Ambady, N. (2003). Effects of situational power on automatic racial prejudice. *Journal of Experimental Social Psychology, 39*, 177-183.	This study led White females to expect to have a superior or subordinate role in an upcoming interracial or same-race interaction. Then, they completed the IAT. Participants expecting an interracial interaction exhibited less implicit bias when assigned to the subordinate role than when assigned to the high-power role. Situational power had no influence on participant attitudes when they anticipated a same-race interaction.	Situational power can affect the implicit bias exhibited by Whites. When members of disadvantaged groups occupy high-status roles, implicit bias in White subordinates may be attenuated. Moreover, this study suggests that White authority figures (e.g., judges) may be more susceptible to the effects of implicit bias than those who do not occupy high-powered professional roles. These individuals should therefore be more vigilant in monitoring their behaviors for potential bias.
Rudman, L., & Lee, M. (2002). Implicit and explicit consequences of exposure to violent and misogynous rap music. *Group Processes and Intergroup Relations, 5*, 133-150.	Two experiments showed that exposure to rap music with violent and misogynistic content increased automatic accessibility of racial stereotypes in both high and low prejudiced participants (Study 1) and elicited more stereotypic judgments (Study 2) compared to controls.	Type of music may be another environmental cue that triggers stereotype activation and implicit bias.

Sherif, M., Harvey, O., White, B., Hood, W., & Sherif, C. (1961). *Intergroup conflict and cooperation: The Robbers Cave experiment*. Norman: University of Oklahoma Book Exchange.	Reviews the now-infamous Robbers Cave Experiments on intergroup conflict and cooperation in which the authors conducted a summer camp with psychologically healthy boys, created social groups amongst them, and watched conflict develop as a result of the artificially-created social groups. Sherif and colleagues found that superordinate goals that could be achieved only through multi-group cooperation reduced intergroup bias and conflict much more than other strategies (e.g., communication, increased contact).	Cooperation is now widely regarded by experts as one of the most effective evidence-based strategies for reducing bias and conflict.

Appendix H
Program Evaluation Questions

Suggestions for Evaluating Judicial Branch Educational Programs on Implicit Bias

As noted in the report, educators should work with the evaluator to construct a logic model similar to the one used for the pilot programs and presented in Table H-1. This exercise is beneficial to both parties because it requires them to commit their assumptions about the program to paper, allowing them to identify and clarify different program expectations. The process also fosters collaborative thinking about how program activities can be expected to produce short-term outcomes and long-term impacts.

Table H-1. Template for Implicit Bias Program Development

Long-term Goal: To reduce the influence of implicit bias on the decision making and other behaviors of judges and court staff

Objectives: As a result of participation in the implicit bias program, participants will be able to:
- Demonstrate a basic understanding of implicit bias
- Identify possible strategies to mitigate the influence of implicit bias on behavior
- Develop an individualized action plan to address implicit bias

Target Population: Judges and other court staff

Inputs/Resources	Processes/Activities	Outputs	Outcomes	Impact
• Program Content • Delivery methods/ presentation strategies • Onsite experts, trainers, facilitators	• Provide pre-program work • Provide implicit bias information using specified curriculum delivery strategies (e.g., lecture, interactions with subject matter experts, small group discussions) • Administer a pre- and post-test of implicit bias knowledge • Administer follow-up questionnaire to determine post-program effects	• Number of participants in program • Number of completed pre- and post-tests of implicit bias knowledge	• Participants express satisfaction with the training • Participants demonstrate increase in implicit bias knowledge • Participants develop individualized action plan to address the influence of implicit bias on their behaviors	• Judges/court staff engage in activities to address their implicit biases • There are observable changes in judicial & staff decisions and behaviors • Disparate case outcomes due to race and ethnicity are reduced

Program evaluation focuses on three types of measures: process, outcome, and impact. A discussion of each follows.

Process Measures

Process measures examine the delivery process. They seek information from participants regarding their satisfaction with the program content, specific delivery methods (e.g., lecture, small group discussions, and exercises), faculty, and the applicability of the program to their work. They also ask for feedback regarding what participants liked the most about the program and areas in which the program could be improved. Information from these types of questions guides revisions to the design and execution of future programs.

Outcome Measures

Outcome measures describe the immediate consequences of participating in a program. The pilot programs focused on the first objective specified in Table H-1: demonstrate a basic understanding of implicit bias. The outcome measures for this objective examined participants' knowledge of implicit bias before and after the delivery of the program. Some suggestions for developing pre and posttest measures are:

- Make sure that questions designed to assess learning align well with the information presented in the program to avoid quizzing participants about facts not covered or covered superficially. This is one of the reasons a logic model is so important; it helps ensure that program developers, faculty, and evaluators are on the same page regarding what information will be presented and emphasized to achieve specific program objectives.
- Develop a protocol that will enable the evaluator to match pretests and posttests from the same participants while maintaining participants' anonymity. Given the sensitive nature of the subject matter, it is essential that participants know that their responses will be anonymous. As an example, one pilot program distributed an evaluation package that included both the pretest and the posttest with a page separating the two. The pretest and the posttest in each packet had the same identification number. Once participants completed the pretest, they reached a page that told them to stop and not answer any more questions until the end of the program. Program planners collected the pretests before the program began, collected the posttests after the program was completed, and matched the identification numbers on both tests before coding and analyzing the responses.
- Be careful in crafting forced-choice questions that are not too hard or too easy. The experience from the pilot programs demonstrated that it was difficult to design questions that were general (i.e., not too specific for an introductory program) and not too obvious regarding the correct response. Table H-2 lists a set of questions the project team suggests to measure gains in knowledge about implicit bias. Note that most of these questions are designed to address the first objective in the logic model; question 2 also addresses the second objective related to strategies to mitigate the influence of implicit bias. Educational programs that emphasize the second and third objectives in the logic model will need additional questions to measure outcomes for these objectives.

Table H-2. Suggested Items for Measuring Implicit Bias Knowledge Gain

Questionnaire Item	Response Options (bolded answer is correct)
1. Implicit biases:	(a) are produced by the unconscious processing of stereotypes (b) can influence the behavior of a person who is not overtly or consciously biased (c) are difficult to alter (d) **All of the above**
2. Which of the following techniques have been shown to limit the influence of implicit biases?	(a) Judicial intuition (b) Suppressing stereotypic thoughts (c) **Exposure to positive, counter-stereotypical exemplars** (d) All of the above
3. The Implicit Association Test (IAT):	(a) measures reaction time (b) pairs a value judgment (e.g., good or bad) with a stimulus such as a photo of someone (c) should not be used to diagnose an individual as biased (d) **all of the above**
4. What is the best evidence we currently have that implicit biases exist?	(a) Analysis of criminal justice statistics (b) **Scores on tests that measure implicit biases (e.g., IAT) have been shown to correlate with behavior** (c) Self-reports (d) All of the above
5. Justice professionals can fail to recognize the influence of implicit bias on their behavior because:	(a) they are skilled at constructing arguments that rationalize their behavior (b) of work-related pressures (c) they are confident they can avoid racial prejudice in decision making (d) **All of the above**

- Along with forced-choice questions, consider including questions with responses along a measurement scale that can be used to gauge shifts in participant beliefs about implicit bias. For example:

> In your opinion, how often do implicit biases influence judges' decisions and court staff interactions with the public? (a) Always, (b) Often, (c) Occasionally, (d) Rarely, (e) Never

This type of question was helpful in demonstrating shifts in opinions as a result of the program.

- Do not use the IAT as an outcome measure. Program planners contemplated administering the IAT or a paper-and-pencil test of implicit bias (see, e.g., Vargas, Sekaquaptewa, & von Hippel, 2007) to directly assess whether participants attitudes about race changed as a result of the implicit bias program. They rejected this approach for two primary reasons. First, the test-retest reliability of the IAT is useful for research in the aggregate, but is not very reliable or diagnostic as an individual difference measure:

> [I]t is clearly premature to consider IATs as tools for individual diagnosis in selection settings or as a basis for decisions that have important personal consequences. The modest re-test-reliability of IAT measures together with the unanswered questions concerning the explanation of IAT effects make evident that potential applications should be approached with care and scientific responsibility. (Schnabel, Asendorpf, & Geeenwald, 2008, p. 524)

Even modest test-retest reliability has the potential to confound the type of pre- and post-testing contemplated for the implicit bias programs. A valid and reliable diagnostic instrument should be able to produce the same diagnosis when the same individual is tested on more than one occasion (assuming that there has been no deliberate intervention to change the diagnosis). However, an individual's IAT result may change depending on the situational context in which the test is taken (e.g., Castelli & Tomelleri, 2008). Moreover, features of the test itself, such as the order in which a test-taker completes components of an IAT test, can affect individual test results (e.g., Greenwald, McGhee, & Schwartz, 1998). If evaluators cannot reliably expect an individual to produce the same IAT score upon re-testing without an intervention, then they will be unable to rule out that a change in IAT score following an intervention is the product of measurement "noise" rather than the intervention itself.

Second, all three educational programs were brief, low-intensity interventions and were not likely, on their own, to be sufficiently powerful to produce measurable changes in implicit bias. As noted in the report, these programs served as the first step to combating implicit bias—raising awareness that implicit bias exists. As Greenwald and Krieger (2006, p. 964) point out while discussing interventions that attempt to alter the level of implicit bias:

> In studies using the Race IAT, these effects were typically modest, taking the form of reduction, but not elimination, of implicit biases. Although the necessary research has not yet been done, caution is warranted in speculating that repeated interventions of the types demonstrated to be effective in these experiments will have enduring effects on levels of implicit bias.

As a result, program planners should be careful in distinguishing interventions to reduce implicit bias and interventions to reduce the influence of implicit bias (see Lesson Learned #5 in the report).

Impact Measures

Impact measures focus on the long-term consequences of the intervention. Although this project did not investigate the long-term effects of the implicit bias programs (except for one 3-month follow-up as described below), the logic model offers three potential impact measures program planners can consider: (1) judges and court staff engage in activities to address their implicit biases, (2) there are observable changes in judicial & staff decisions and behaviors, and (3) disparate case outcomes due to race and ethnicity are reduced.

Surveys can assess the extent to which participants are undertaking efforts to personally address and learn more about implicit bias. The project team recommends that an initial follow-up survey be administered three to six months after the educational program to determine participants' opinions on the program after some time to reflect and to learn if they took any actions as a result of the program information. Another survey should be administered at least one year after participation in the educational program to properly assess long-term impacts.

One indicator of success for an introductory program is if it motivated participants to learn more about and take steps to mitigate the influence of implicit bias (Brookfield, 1986). To measure this, one of the pilot programs issued a Web-based survey to participants 3 months after the program session. The short questionnaire included the following questions:

- Given the information you learned about implicit bias, how important do you think it is for judges in North Dakota to be aware of the potential influence of implicit bias on their behavior? Scale: 1 (Very unimportant) to 7 (Very important)
- Since participating in the November program, have you made any efforts to increase your knowledge about implicit bias, such as taking the IAT or doing additional reading on the subject? If yes:
  - Have you taken any of the IATs?
  - Have you engaged in any other activities to increase your knowledge of implicit bias?
- Have you personally made any efforts to reduce the potential influence of implicit bias on your behavior? If yes:
  - Please describe the specific efforts you have taken to reduce the potential impact of implicit bias on your behavior.
- Do you have any suggestions for improving the training that you received on implicit bias?

Program planners also tried another approach to determine whether program participants were motivated to learn more about implicit bias after the program. This approach investigated the number of visits by participants to secure Web sites to take the IAT. Data for this approach was too sparse to interpret and thus the approach is not recommended for future programs.

Measurable changes in judicial decision-making and other behaviors of participating judges (by, e.g., examining changes in sentencing decisions over time, particularly the impact on disparate sentencing outcomes) would provide evidence of possible long-term impact from the interventions, consistent with the goal of the project. Official statistics, direct observation of judge and court staff behavior, and surveys or focus groups of defendants could provide the data needed to make this assessment. Relying on official statistics alone is not recommended since these are subject to the influence of any number of factors, of which a training program is only one. A convincing evaluation of official statistics would be able to tease out the effect of the program from these other "confounding" influences, which is virtually impossible to accomplish without an experimental design. Further, any such evaluation would be necessarily longitudinal in design, requiring time, patience, and resources.

Systematic observation of courtroom behavior over time, using a structured court observation instrument, may be a more practical approach. Although such observations could be made in any court, implicit bias may be more evident in high volume, speedy dockets such as traffic court or arraignments—environments where judges maybe prone to take mental short-cuts such as relying on stereotypes to make relatively complex judgments quickly.

Finally, courts should also consider surveying defendants over time to measure their perceptions of fairness at the hands of the court. For example, some of the "fairness" questions from *CourTools Measure 1, Access and Fairness* (National Center for State Courts, 2005)*,* could be used in such an investigation. Survey respondents are asked to indicate their extent of agreement or disagreement with the following statements:

1. The way my case(s) was handled was fair.
2. The judge listened to my side of the story before he or she made a decision.
3. The judge had the information necessary to make good decisions about my case.
4. I was treated the same as everyone else.

Such surveys of defendant perceptions of fairness at the hands of the court could be administered periodically, and the results disaggregated by relevant defendant characteristics (e.g., defendant race and/or gender). By measuring changes in defendant perceptions over time, changes in courtroom behavior may be documented.

References

Brookfield, S. (1986). *Understanding and facilitating adult learning: A comprehensive analysis of principles and effective practices.* San Francisco: Jossey-Bass.

Castelli, L., & Tomelleri, S. (2008). Contextual effects on prejudiced attitudes: When the presence of others leads to more egalitarian responses. *Journal of Experimental Social Psychology*, *44*, 679–686. doi:10.1016/j.jesp.2007.04.006

Greenwald, A., & Krieger, L. (2006). Implicit bias: Scientific foundations. *California Law Review*, *94*, 945–967.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. K. L. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology*, *74*, 1464-1480.

National Center for State Courts. (2005). *CourTools*. Williamsburg, VA.: Author.

Schnabel, K., Asendorpf, J. B., & Greenwald, A. G. (2008). Using implicit association tests for the assessment of implicit personality self-concept. In G. J. Boyle, G. Matthews, & H. Saklofske (Eds.), *Handbook of personality theory and assessment: Vol. 2 personality measurement and testing* (pp. 508-528). London: Sage.

Vargas, P. T., Sekaquaptewa, D., & von Hippel, W. (2007). Armed only with paper and pencil: "Low-tech" measures of implicit attitudes. In B. Wittenbrink & N. Schwarz (Eds.), *Implicit measures of attitudes* (pp. 103-124). New York: Guilford Press.