

March 1, 2017

**MEMORANDUM**

TO: Senator Holly Mitchell  
Attn: Luan Huynh

FROM: Megan Lane  
Senate Office of Research

SUBJECT: Senate Select Committee on Women and Inequality Hearing on  
Implicit Bias, March 8, 2017

Per your request, attached is information on the topic of implicit bias. The document reflects my quick review of various source materials, primarily an overview by the Kirwan Institute for the Study of Race and Ethnicity and several other scholarly articles, including one published in *The Chronicle of Higher Education* in January 2017 that presents differing views on the research literature. Due to time constraints, I was unable to conduct a more thorough assessment of the full body of research.

If I can be of further assistance, please do not hesitate to let me know at (916) 651-1500.

ML:tr  
Attachment

## Brief Summary of Implicit Bias

Implicit bias involves “attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner.”<sup>1</sup> According to a body of scholarly research, the unconscious attitudes we hold about other people often are based on categories such as race, gender, age, or ethnicity. Studies suggest that implicit bias is pervasive, not necessarily in line with our declared beliefs, developed early in life, and not fixed.<sup>2</sup> Further, implicit bias is expressed at both an individual and institutional level. Institutional bias has been studied in the education, employment, and criminal justice contexts,<sup>3</sup> and it may present itself in an organization’s policies and procedures. Some researchers believe implicit bias influences behavior and contributes to discriminatory conduct.<sup>4</sup> Conversely, other experts contend that the evidence linking unconscious bias to discriminatory behavior is weak and warrants further study.<sup>5</sup>

### The State of Research on Implicit Bias

In the 1950s, psychologists studying social cognition focused on the nature of prejudice. Early research on prejudice led to studies that attempted to separate out our “automatic” versus “controlled” processing of information.<sup>6</sup> In the 1990s, researchers focused much of their attention on understanding our automatic or unconscious judgments. In 1995, social psychologists Anthony Greenwald and Mahzarin Banaji published the first definition of implicit bias, describing it as “introspectively unidentified . . . traces of past experience that mediate favorable or unfavorable feeling, thought or action toward social objects.”<sup>7</sup> A few years later, Greenwald and

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<sup>1</sup> Kirwan Institute for the Study of Race and Ethnicity, “Understanding Implicit Bias,” Ohio State University, 2015. <http://kirwaninstitute.osu.edu/research/understanding-implicit-bias/>.

<sup>2</sup> Ibid.

<sup>3</sup> For further reading on implicit bias in the criminal justice system, see L. Song Richardson and P. Goff, “Implicit Bias in Public Defender Triage,” University of Iowa Legal Studies Research Paper Series, no. 13–24, 2013. [https://papers.ssrn.com/sol3/papers2.cfm?abstract\\_id=2259079](https://papers.ssrn.com/sol3/papers2.cfm?abstract_id=2259079).

<sup>4</sup> Anthony Greenwald and L. Hamilton Krieger, “Symposium on Behavioral Realism: Implicit Bias: Scientific Foundations,” *California Law Review*, vol. 94, 2006, p. 960.

<sup>5</sup> Tom Bartlett, “Can We Really Measure Implicit Bias? Maybe Not,” *The Chronicle of Higher Education*, January 5, 2017. <http://www.chronicle.com/article/Can-We-Really-Measure-Implicit/238807>.

<sup>6</sup> Richard Shiffrin and W. Schneider, “Controlled and Automatic Human Information Processing: Perceptual Learning, Automatic Attending, and a General Theory,” *Psychological Review*, vol. 84, 1977, p. 127.

<sup>7</sup> Anthony Greenwald and M. Banaji, “Implicit Social Cognition; Attitudes, Self-Esteem, and Stereotypes,” *Psychological Review*, vol. 102, no. 1, 1995, p. 8.

collaborating researchers developed the Implicit Association Test (IAT) to measure unconscious attitudes toward various groups of people.<sup>8</sup>

There is much that studies have yet to demonstrate about the causes and effects of implicit bias. Most of the laboratory research to date uses small sample sizes with participants of similar demographics, such as race, gender, and age.<sup>9</sup> Expanding the scope of laboratory studies could provide a more accurate assessment of the prevalence of implicit bias. In addition, the operation of implicit bias in certain social domains, such as medicine and in legal practices, could benefit from further research.<sup>10</sup> Likewise, future research could focus on intergroup attitudes toward understudied racial minorities such as Asians and Latinos.<sup>11</sup>

### **Measuring Implicit Bias**

One well-known and widely used tool for measuring unconscious bias is the IAT. There are a multitude of IATs measuring bias toward body image, race, gender, age, sexual orientation, and other categories. Available online, the tests measure a subject's reaction time to pairing certain images with either common or uncommon stereotypes. For example, the gender-career IAT compares how quickly an individual pairs the concepts "male" or conversely, "female" with "career."

There is much debate about the reliability and utility of the IAT in measuring implicit bias and predicting discriminatory behavior.<sup>12</sup> Some social psychologists question the consistency of test results over time and point out that an individual taking the test multiple times will invariably get different results as to the extent of their bias.<sup>13</sup> In addition, critics of the IAT argue that it uses arbitrary metrics when scoring the test.<sup>14</sup> They see the numeric scores assigned to different levels of bias as random.

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<sup>8</sup> Anthony Greenwald, D. McGhee, and J. Schwartz, "Measuring Individual Differences in Implicit Cognition: The Implicit Association Test," *Journal of Personality and Social Psychology*, vol. 74, 1998, p. 1464.

<sup>9</sup> Patrick S. Forscher et al., "A Meta-Analysis of Change in Implicit Bias," May 5, 2016, p. 34. [https://www.researchgate.net/publication/308926636\\_A\\_MetaAnalysis\\_of\\_Change\\_in\\_Implicit\\_Bias](https://www.researchgate.net/publication/308926636_A_MetaAnalysis_of_Change_in_Implicit_Bias).

<sup>10</sup> Kristin Lane et al., "Implicit Social Cognition and Law," *Annual Review of Law and Social Science*, vol. 3, 2007, p. 427.

<sup>11</sup> Nilanjana Dasgupta, "Implicit Ingroup Favoritism, Outgroup Favoritism, and Their Behavioral Manifestations," *Social Justice Research*, vol. 17, no. 2, 2004.

<sup>12</sup> Tom Bartlett, "Can We Really Measure Implicit Bias? Maybe Not," *The Chronicle of Higher Education*, January 5, 2017. <http://www.chronicle.com/article/Can-We-Really-Measure-Implicit/238807>.

<sup>13</sup> Ibid.

<sup>14</sup> Beth Azar, "IAT: Fad or Fabulous?," *American Psychological Association*, vol. 39, no. 7, July/August 2008.

Other researchers believe that the IAT is an effective tool in bias recognition and in predicting people's behaviors and attitudes. Several studies have found that the test is reliable and relatively unsusceptible to manipulation.<sup>15</sup> Other studies conclude that the IAT is good at predicting distinct forms of conduct such as nonverbal behavior.<sup>16</sup> At a minimum, the test's developers believe the IAT creates a forum to discuss implicit bias and engages the public in examining their unconscious attitudes.<sup>17</sup>

### **Potential Solutions to Recognize and Reduce Implicit Bias**

Proponents in this field suggest that recognizing and understanding our unconscious attitudes is the first step toward changing them. Some recommend implementing an education and training program to help individuals identify their biases and understand how they operate.<sup>18</sup> After gaining this awareness, individuals can benefit from intergroup contact (also known as the "contact hypothesis"). The intergroup theory contends that an individual's tendency to favor his/her "own" in-group can be mitigated by engaging in activities with members of an out-group.<sup>19</sup> Engaging in intergroup activities allows us to see one another as one large group and identify commonalities.

Another approach to combating implicit bias, known as exposure, uses mental imagery to promote counter-stereotypes.<sup>20</sup> A number of studies have shown that activating counter-stereotypes helps individuals reduce their automatic prejudices.<sup>21</sup> Furthermore, focusing on decision-making accountability may decrease implicit bias. In the employment context, an accountability system would motivate hiring managers to make careful judgments based on an individual's qualifications.<sup>22</sup> In a school setting,

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<sup>15</sup> Anthony Greenwald et al., "Understanding and Using the Implicit Association Test: An Improved Scoring Algorithm," *Journal of Personality and Social Psychology*, vol. 85, no. 2, 2003, p. 197.

<sup>16</sup> Virginia Valian, "Why So Slow? The Advancement of Women" (Cambridge, MA: The MIT Press, 1998).

<sup>17</sup> Tom Bartlett, "Can We Really Measure Implicit Bias? Maybe Not," *The Chronicle of Higher Education*, January 5, 2017. <http://www.chronicle.com/article/Can-We-Really-Measure-Implicit/238807>.

<sup>18</sup> Robin A. Wright, "Race Matters . . . and So Does Gender: An Intersectional Examination of Implicit Bias in Ohio School Discipline Disparities," Kirwan Institute for the Study of Race and Ethnicity, June 2016.

<sup>19</sup> Elizabeth Paluck and D. Green, "Prejudice Reduction: What Works? A Review and Assessment of Research and Practice," *Annual Review of Psychology*, vol. 60, 2009, p. 339.

<sup>20</sup> Irene Blair, "The Malleability of Automatic Stereotypes and Prejudice," *Personality and Social Psychology Review*, vol. 6, 2002, p. 242.

<sup>21</sup> Ibid.

<sup>22</sup> Katharine Bartlett, "Making Good on Good Intentions: The Critical Role of Motivation in Reducing Implicit Workplace Discrimination," *Virginia Law Review*, vol. 95, 2009, p. 1963.

fostering accountability in the disciplinary process might encourage educators and administrators to question their objectivity and engage in a deliberate processing of the situation before issuing discipline.<sup>23</sup>

### **Possible Discussion Questions for the Committee**

- What has been your experience with implicit bias?
- To what extent have you engaged in self-examination regarding your potential biases?
- Which approaches to reducing implicit bias do you favor and why?
- Why is it difficult to change our unconscious attitudes and stereotypes?

### **Additional Resources**

Kirwan Institute for the Study of Race and Ethnicity, "State of the Science: Implicit Bias Review," Ohio State University, 2016, <http://kirwaninstitute.osu.edu/wp-content/uploads/2016/07/implicit-bias-2016.pdf>

Prejudice-reduction studies database compiled by Elizabeth Paluck, Harvard Academy for International and Area Studies, <http://www.refworks.com/refshare/?site=010141135929600000/RWWS5A1333317/Prejudice%20reduction&lowresMode=true>

The National Academies of Sciences, Engineering, and Medicine, Committee on Women in Science, Engineering, and Medicine, Resources on Implicit Bias, [http://sites.nationalacademies.org/PGA/cwsem/PGA\\_161607](http://sites.nationalacademies.org/PGA/cwsem/PGA_161607)

Association of American Medical Colleges, "What You Don't Know: The Science of Unconscious Bias and What to Do About It in the Search and Recruitment Process," <http://ssom.luc.edu/media/stritchschoolofmedicine/diversity/documents/bibliography.pdf>

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<sup>23</sup> Robin A. Wright, "Race Matters . . . and So Does Gender: An Intersectional Examination of Implicit Bias in Ohio School Discipline Disparities," Kirwan Institute for the Study of Race and Ethnicity, June 2016.