Follow the Science: Proven Strategies for Reducing Unconscious Bias

By David Hoffman* and Helen Winter**

ABSTRACT

Mediators, arbitrators, and lawyers have a duty to be unbiased, and yet they—like others in society—are influenced by unconscious biases. Social psychologists have explored the origins of these biases and, in recent years, developed experimental techniques for reducing unconscious bias. This article surveys the social psychology literature regarding such techniques and identifies seven main categories of promising interventions: awareness, motivation, individuation, perspective-taking, contact, stereotype replacement, and mindfulness. The article suggests several real-world applications of these techniques to address both individual and systemic biases and concludes with a description of some unanswered questions regarding bias reduction strategies.

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I. Introduction

Imagine that you are appearing before a judge and your fate is in their hands. Will the outcome be affected by your race? Statistical research suggests that in criminal proceedings, the more Afrocentric your facial features are, the harsher the sentence.[1]

What if you need medical treatment? Could your race or your gender affect the care you receive? Again, multiple studies show that the answer is yes.[2]

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1. *See generally* Irene V. Blair et al., *The Influence of Afrocentric Facial Features in Criminal Sentencing*, 10 Psych. Sci. 674, 674 (2004); M. Marit Rehavi & Sonja B. Starr, *Racial Disparity in Federal Criminal Sentences*, 122 J. Pol. Econ. 1320 (2014).

2. *See generally* Alexander R. Green et al., *Implicit Bias among Physicians and its Prediction of Thrombolysis Decisions for Black and White Patients*, 9 J. Gen. Intern. Med. 1231 (2007); Elizabeth N. Chapman et al., *Physicians and Implicit Bias: How Doctors May Unwittingly Perpetuate Health Care Disparities*, 28 J. Gen. Internal Med. 1504 (2013).

You're applying for a job. Will your race and gender, as indicated on your resume, affect your chances of getting an interview? Once again, the answer is yes, based on numerous studies.[3]

If you are looking for an apartment to rent, will your race affect your likelihood of finding one? Abundant research shows that the answer is yes.[4]

Finally, imagine you are buying a car. Are you likely to be offered a better deal if you are White and male as opposed to Black and female? A controlled experiment shows that the answer is yes.[5]

What if you asked the judge, doctor, employer, landlord, and car salesperson if they are biased? We believe that each of them would most likely say "absolutely not!" and mean it. Yet, the studies cited above suggest otherwise. These studies, and others like them,[6] demonstrate that unconscious biases are ubiquitous in our society and have pernicious effects.

A. *What is "Unconscious Bias"?*

The term "unconscious bias" (or "implicit bias") refers to a set of attitudes and stereotypes—whether positive or negative—that we are unaware of.[7] This article will focus primarily on negative biases, such as those that result in discriminatory treatment of the kind described above.[8] Some of these biases may be diametrically opposite of

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3. *See generally* Lincoln Quillian et al., *Evidence from Field Experiments in Hiring Shows Substantial Additional Racial Discrimination after the Callback*, 99 Soc. Forces 732, 732 (2020); Corinna A. Moss-Racusin et al., *Science Faculty's Subtle Gender Biases Favor Male Students*, 109 Psych. & Cognitive Scis. 16474 (2012); Patrick M. Kline et al., *Systemic Discrimination Among Large U.S. Employers*, 137 Q.J. Econ. 1963 (2022).

4. *See generally* Jacob William Farber & Marie-Dumesle Mercier, *Multidimensional Discrimination in the Online Rental Housing Market: Implications for Families with Young Children,* Hous. Pol'y Debate (Jan. 24, 2022); Margery Austin Turner et al., *Housing Discrimination Against Racial Ethnic Minorities 2021,* U.S. Dept. of Hous. & Urb. Dev., Off. of Pol'y Dev. & Rsch. (2013).

5. *See generally* Ian Ayres, *Fair Driving: Gender and Race Discrimination in Retail Car Negotiations*, 104 Harv. L. Rev. 817 (1991).

6. *See generally* Barbara A. Reskin, *Unconsciousness Raising: The Pernicious Effects of Unconscious Bias,* Fed. Rsrv. Bank Bos. Reg'l Rev. 33-37 (2005) (citing examples), http://www.bostonfed.org/economic/nerr/rr2005/q1/section3a.pdf, *archived at* https://perma.cc/AN7T-X779.

7. *See generally* Jerry Kang, *Implicit Bias: A Primer for Courts*, Nat'l Ctr. for State Cts. (August 2009).

8. "Positive" biases, sometimes called a "halo effect," may be either welcome (*see, e.g.,* Michael G. Efran, *The Effect of Physical Appearance on the Judgment of Guilt, Interpersonal Attraction, and Severity of Recommended Punishment in a Simulated Jury Task*, 8 J. Rsch. Personality 45, 51 (1974) (physically attractive criminal defendants more positively evaluated than unattractive ones)) or unwelcome (*see, e.g.,*

our conscious views but nevertheless affect our behavior. Although *explicit* bias—i.e., conscious attitudes and stereotypes—is also important and correlates with biased behavior, implicit bias is an even more robust predictor of discriminatory behavior.[9]

Researchers have found that our biases develop early in our lives. One study found that infants aged six to nine months have a preference for people of their own race and a bias against people of other races.[10] There are several theories as to what causes these preferences and biases. Some contend that implicit bias is driven primarily by ingroup favoritism rather than outgroup animus or aversion.[11] Other researchers contend that a major contributing factor is "status-quo bias"—a mental preference for the existing order—and those studies are supported by findings that people from historically marginalized groups favor ingroup members to a greater extent than ingroup members favor those from the outgroup.[12] And, of course, there is abundant support for the view that a barrage of negative messages received by children (and adults) regarding outgroup members shape both conscious beliefs and unconscious attitudes.[13]

This article does not seek to determine the extent to which each of the factors described above, among others, may contribute to the problem of implicit bias.[14] Instead, our focus is on the effectiveness of bias-reduction strategies.[15]

Lisa Kiang et. al., *Moving Beyond the Model Minority*, 8 Asian Am. J. Psych. 1, 2–3 (2017) ("model minority image" can be damaging because of inaccuracy, pressure to achieve, reinforcing racial stratification, and discomfort with being "pigeon-holed")).

9.   *See* Curtis Hardin & Mahzarin R. Banaji, *The Nature of Implicit Prejudice: Implications for Personal and Public Policy*, in The Behavioral Foundations of Public Policy 10 (E. Shafir, ed. 2010) ("implicit measures generally predict behavior better than explicit measures").

10.   *See, e.g.,* University of Toronto, *Infants Show Racial Bias Toward Members of Own Ethnicity, Against Those of Others*, Sci. Daily (April 11, 2017), https://www.sciencedaily.com/releases/2017/04/170411130810.htm, *archived at* https://perma.cc/5Y92-UQU9.

11.   *See generally* Anthony Greenwald & Thomas Pettigrew, *With Malice Toward None and Charity for Some: Ingroup Favoritism Enables Discrimination*, 69 Am. Psych. 669 (2014).

12.   *See* John T. Jost, A Theory of System Justification 79-81 (2020).

13.   *See* Srividya Ramasubramanian, *Intergroup Contact, Media Exposure, and Racial Attitudes*, 42 J. Intercultural Commc'n Rsch. 54, 56 (2013).

14.   It seems reasonable to believe that individuals and cultures may vary considerably insofar as the relative impact of those causative factors is concerned.

15.   We anticipate that in the years ahead, further research into the causes of implicit bias will provide further guidance on the most effective bias-reduction strategies.

B. *Individual Bias vs. Systemic Barriers*

Efforts to end invidious discrimination often confront two issues: individual biases and systemic barriers. The two obstacles are related: the exclusion of historically marginalized groups caused by structural barriers can reinforce individuals' biases against those groups, and such biases reduce the motivation to remove those barriers, or even to examine them.

In our view, the reduction of individuals' biases is not a substitute for concerted action to eliminate structural barriers. Instead, we view bias-reduction strategies as supportive of, and synergistic with, campaigns to break down structural barriers. For example, in workplaces where women and people of color are under-represented in management, efforts to reduce explicit and implicit racial and gender bias can help break down obstacles to promotion, but they are not a substitute for creating structures of accountability to make companies and organizations responsible for achieving greater diversity, equity, and inclusion in the ranks of management.

C. *Overview of this Article*

As lawyers and dispute resolution professionals, our initial goal in writing this article was to provide a "user's guide" to the burgeoning research on bias reduction for our fellow attorneys and dispute resolvers. Attorneys have a professional duty of non-discrimination,[16] and dispute resolution professionals (e.g., mediators and arbitrators) have a duty to be impartial.[17] An important component of both of these duties is to try to identify—and counteract—unconscious bias. However, once we began delving into the broad expanse of bias-reduction research, we did not want to limit the focus of our endeavor to dispute resolution or law practice. Reducing unconscious bias should, in our opinion, be a goal of all in our society. Many of the injustices in our world today—a few of which

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16. *See* Model Rules of Pro. Conduct Rule 8.4(g) (Am. Bar Ass'n 2020) ("It is unprofessional conduct for a lawyer to . . . engage in conduct that the lawyer knows or reasonably should know is harassment or discrimination on the basis of race, sex, religion, national origin, ethnicity, disability, age, sexual orientation, gender identity, marital status or socioeconomic status in conduct related to the practice of law.").

17. *See* Model Standards of Conduct for Mediators Standard II(A) (Am. Arb. Ass'n 2005) ("A mediator shall decline a mediation if the mediator cannot conduct it in an impartial manner. Impartiality means freedom from favoritism, bias or prejudice."); Code of Ethics for Arbitrators Canon I(B) (Am. Arb. Ass'n 2004) ("One should accept appointment as an arbitrator only if fully satisfied: (1) that he or she can serve impartially . . .").

are described in the opening section of this article—are fostered, reinforced, and perpetuated by unconscious biases.

Part II of this Article describes some of the challenges that confront researchers seeking to identify and counteract unconscious biases.

Part III reviews the major bias-reduction strategies that researchers have tested in laboratory and field experiments. We also describe the meta-analytic research assessing the effectiveness of these strategies.

Part IV suggests a variety of practical applications of this research for individuals and organizations.

Finally, Part V poses a number of unanswered questions that, in our view, deserve the attention of researchers seeking to improve bias-reduction strategies.

II. Challenges

A. *Complexity of Research*

One of the biggest challenges for individuals and organizations seeking to reduce implicit bias is the sheer volume and methodological complexity of research in this area.[18] This may overwhelm or even deter the lay reader from in-depth exploration. Some studies focus on the origins of bias, others on the measurement of bias, and still others on methods for counteracting bias. Many of the studies produce conflicting findings, such as on the effectiveness of diversity training.[19] Some of the research involves small cohorts of experimental subjects, and other studies are meta-analyses in which results from thousands of experimental subjects are analyzed. Some of the studies examine the impact of bias-reduction strategies longitudinally (to see how long a strategy will work), while the majority examine only the effects of an intervention shortly afterwards and often only once. This article attempts (in Part III) to cull from that varied body of research the most promising ideas regarding bias-reduction

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18. *See* Elizabeth Levy Paluck & Donald P. Green, *Prejudice Reduction: What Works? A Review and Assessment of Research and Practice*, 60 Ann. Rev. Psych. 339, 340 (2009) ("By many standards, the psychological literature on prejudice ranks among the most impressive in all of social science. The sheer volume of scholarship is remarkable, reflecting decades of active scholarly investigation . . . .").

19. *Compare* Frank Dobbin & Alexandra Kalev, *Why Doesn't Diversity Training Work? The Challenge for Industry and Academia*, 10 Anthropology Now 48 (Oct. 27, 2018), *with* Doyin Atewologun et al., Equal. and Human Rights Comm'n Rsch., Unconscious Bias Training: An Assessment of the Evidence for Effectiveness (2018).

and to suggest (in Part IV) how those ideas might be used by individuals and organizations.

B. *Measuring Bias*

Social psychologists use a variety of self-reporting tools to measure *explicit* bias, some of which pose direct questions while others use indirect questions in order to blunt the skewing of results that may be caused by social-desirability concerns of research participants.[20] However, measuring *implicit* bias is challenging because the participants' attitudes are, by definition, not consciously available to the participants.

One way to measure unconscious bias is to examine—with the help of functional MRI ("fMRI") technology—the activation of different parts of the brain when presented with stimuli. In one such study, White subjects were shown photographic images of Black faces and White faces, and the MRI recorded the subjects' reactions. When the images were only 30 milliseconds and therefore subliminal (i.e., shown so fleetingly that the subjects were not aware that they had seen a photograph), there was increased amygdala activation when the subjects saw Black faces as opposed to White faces, suggesting a fear response. However, when the images appeared for half a second—long enough for the images to consciously register—there was increased frontal cortex activation and less activation of the amygdala, suggesting that the brain's logic circuits were processing the information and therefore suppressing the amygdala's fight-or-flight response.[21]

The most widely used tool for measuring unconscious bias is the Implicit Association Test ("IAT"). Created by Professors Mahzarin Banaji and Anthony Greenwald and available to the public for free on a website maintained by Harvard University,[22] the IAT measures the strength of unconscious associations by calculating the speed of participants' responses to various stimuli.[23] For example, participants

20.   *See* Jordan R. Axt, *The Best Way to Measure Explicit Racial Attitudes is to Ask About Them*, 9 SOC. PSYCH. & PERSONALITY SCI. 896, 896–97 (2018).

21.   *See* William A. Cunningham et al., *Separable Neural Components in the Processing of Black and White Faces*, 15 PSYCH. SCI. 806, 808–811 (2004); Elizabeth A. Phelps et al., *Performance on Indirect Measures of Race Evaluation Predicts Amygdala Activation*, 12 J. COGNITIVE NEUROSCI. 729, 734 (2000) (results suggest that amygdala and behavioral responses to Black-versus-White faces in White subjects reflect cultural evaluations).

22.   www.implicit.harvard.edu, *archived at* https://perma.cc/3UGE-BPK5.

23.   *See generally* MAHZARIN R. BANAJI & ANTHONY G. GREENWALD, BLINDSPOT: HIDDEN BIASES OF GOOD PEOPLE (2013).

might be shown images of faces (say, Black and White faces) and asked to match the faces with the words "good" or "bad," or "pleasant" or "unpleasant." For a majority of White participants, it takes longer to comply with the instruction to pair the Black face with the word "good," and it takes less time to pair the White face with the word "good." The IAT website has tests for race, gender, age, religion, appearance, and many other characteristics.

Use of the IAT has been controversial because of its limited "test-retest reliability": results for an individual can vary from one test administration to the next.[24] Another area of imprecision is the "predictive validity" of the IAT—the extent to which an unconscious bias shown on the IAT correlates with explicit bias or biased behavior. Meta-analyses of research on this question have shown that such a correlation exists, but that it is only a partial correlation.[25] In other words, while it is more likely that someone with unconscious bias will behave in a biased manner or have explicit biases, researchers have found some instances where people who have unconscious bias behave in a non-discriminatory manner.[26] However, we have not found any research indicating that people with unconscious bias who behave in a non-discriminatory manner to one degree or another in a controlled experiment can be counted on to behave that way consistently.

Accordingly, the IAT is not yet sufficiently reliable to be used as a screening device for hiring and similar purposes as applied to individuals. However, the test results in the *aggregate* are useful for measuring the prevalence of unconscious associations in our society.[27] And they are also useful as an awareness-raising tool in unconscious bias trainings because the experience of taking the test brings to the level of conscious awareness the strength of our unconscious associations. For example, one of the creators of the IAT, Prof. Mahzarin Banaji, was "deeply embarrassed" by her first experience of taking the IAT since, as a person of color, she did not think she could

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24. *See* Gerald Guild, *The IAT: Questions of Reliability and Validity*, How Do You Think? (Sept. 10, 2010), https://geraldguild.com/blog/2010/09/10/the-iat-questions-of-reliability-and-validity/, *archived at* https://perma.cc/47QU-4WYU (unaccounted for variance suggests weak consistency).

25. *See* Anthony G. Greenwald et al., *Understanding and Using the Implicit Association Test: III. Meta-Analysis of Predictive Validity*, 97 J. Personality & Soc. Psych. 17, 23 (2009).

26. *See id.*

27. From time to time the IAT team publishes the aggregate results, such as those reported in Tessa E.S. Charlesworth & Mahzarin R. Banaji, *Patterns of Implicit and Explicit Attitudes: IV. Change and Stability from 2007 to 2020*, 33 Psych. Sci. 1347 (2022) (showing reduction in certain kinds of bias).

possibly harbor negative associations about other people of color, but the IAT demonstrated precisely that.[28]

C. *Denial or Resistance*

Another obstacle in the development of bias-reduction strategies is that, with the enactment of laws prohibiting discrimination during the past sixty years in the U.S. and other parts of the world, there has been a dramatic reduction in *espoused* prejudice.[29] To be biased is, for many people, a "moral crime."[30] Researchers have found that people across all demographic categories tend to believe that others are more biased than themselves.[31] Researchers have also shown that people who profess a lack of bias often have unconscious, negative mental associations about people of color and people from other disadvantaged groups.[32] This suggests that participants either consciously mask their biases when answering researchers' questions on self-report surveys concerning bias, or perhaps are genuinely unaware of harboring any biases.[33]

One technique for overcoming resistance to the idea that implicit bias exists is to explain that developing mental shortcuts that operate at a subconscious level is not only a typical and unavoidable feature of human cognition, but also sometimes beneficial. For example, if we are crossing a street and see a car approaching the intersection, we instinctively know from past experience whether we are in danger or not. We do not have to consciously compute the car's estimated speed and distance. In contrast, the effects of these mental shortcuts

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28. *See* Shankar Vedantam, *See No Bias*, WASH. POST, Jan. 23, 2005, https://www.washingtonpost.com/archive/lifestyle/magazine/2005/01/23/see-no-bias/a548dee4-4047-4397-a253-f7f780fae575/, *archived at* https://perma.cc/4Z4S-PJRU.

29. *See generally* Tessa E. S. Charlesworth & Mahzarin R. Banaji, *Patterns of Implicit and Explicit Attitudes: I. Long-Term Change and Stability from 2007 to 2016*, 30 PSYCH. SCI. 174 (2019).

30. DAVID W. CAMPT, THE WHITE ALLY TOOLKIT WORKBOOK 177, 184 (2018).

31. *See* Qi Wang & Hee Jin Jeon, *Bias in Bias Recognition: People View Others but Not Themselves as Biased by Preexisting Beliefs and Social Stigmas*, PLOS ONE (October 9, 2020), https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0240232, *archived at* https://perma.cc/SA9D-SJZ8.

32. *See, e.g.*, Shanto Iyengar et al., *Explicit and Implicit Racial Attitudes: A Test of Their Convergent and Predictive Validity* (Am. Pol. Sci. Ass'n., Ann. Meeting Paper, 2011).

33. One study showed a widespread decrease in self-reported bias against people who are overweight, while during the same period, the levels of unconscious bias against the same group increased and then stabilized at the higher level. *See* Charlesworth & Banaji, *supra* note . *See also* Charlesworth & Banaji, *supra* note REF ID="_Ref118402996">.

may be pernicious when we are engaging with someone who is different from us. For example, when we are deciding whether to hire someone for a job whose race and/or gender are different from ours, our past mental associations regarding those differences may bias our decision in ways that we are completely unaware of, thus perpetuating the discrimination that we consciously oppose.

Studies of "priming" can also provide a useful tool for overcoming people's understandable resistance to the idea that we are all biased. In one well-known study, researchers analyzed five years' worth of decision-making by a medical school admissions office and found that candidates interviewed on rainy days were rated lower than candidates interviewed on sunny days.[34] One of the inferences from this and other priming studies[35] is that the subtle influences all around us—including those related to race, gender, and other characteristics—influence us in ways that we do not realize.

D. *Managing the Challenges*

Some of the challenges described above arise from the nature of scientific inquiry—each hard-won conclusion (such as the existence of unconscious bias) leads to a set of unanswered questions (such as the best ways of measuring and counteracting bias). Other challenges—such as the denial and resistance described above—likely arise from multiple sources, such as: (a) opposition to social change;[36] (b) status-quo bias;[37] (c) identity threat;[38] and (d) the fact that the emerging scientific consensus about the pernicious effects of unconscious bias

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34. *See generally* Donald A. Redelmeier & Simon D. Baxter, *Rainy Weather and Medical School Admission Interviews*, 181 CANADIAN MED. ASS'N. J. 933 (2009).

35. One of the most astonishing of these studies is reported in Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases,* in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES (DANIEL KAHNEMAN ET AL. EDS. 1982), in which participants were shown a spinning wheel, which was rigged to land on either "10" (Group A) or "65" (Group B). Participants were then asked to estimate the number of African nations in the United Nations; the median estimate in Group A was 25, and in Group B it was 45. *See also* DAN ARIELY, PREDICTABLY IRRATIONAL: THE HIDDEN FORCES THAT SHAPE OUR DECISIONS 28–30 (2010) (participants were asked to write down the last two digits of their Social Security numbers, which then impacted their estimates of the cost of various consumer items).

36. *See generally* ISABEL WILKERSON, CASTE: THE ORIGINS OF OUR DISCONTENT (2020).

37. *See generally* John T. Jost, Mahzarin R. Banaji & Brian A. Nosek, *A Decade of System Justification Theory: Accumulated Evidence of Conscious and Unconscious Bolstering of the Status Quo*, 25 POL. PSYCH. 881 (2004).

38. *See generally* DOUGLAS STONE, SHEILA HEEN & BRUCE PATTON, DIFFICULT CONVERSATIONS: HOW TO DISCUSS WHAT MATTERS MOST 109-128 (2010) (discussing identity threat).

has not yet permeated popular culture, nor is it commonly taught in public schools.[39] Despite these obstacles, however, we believe that businesses, educational institutions, and other organizations have a responsibility to "follow the science"[40] and utilize the tools currently available for bias reduction so that our society lives up to its espoused values of non-discrimination.

III.   SUMMARY OF RESEARCH

Scientific research on bias-reduction strategies has identified seven main types of interventions:

A.   Raising awareness of bias
B.   Increasing motivation to counteract bias
C.   Individuation
D.   Perspective-taking and empathy
E.   Contact with "outgroup" members
F.   Stereotype negation / replacement
G.   Mindfulness

It is worth noting that many of these themes overlap (e.g., some interventions designed to raise awareness of bias also have the effect of increasing motivation to counteract bias). Also, some interventions involve the use of more than one of these techniques.

We found that the largest number of studies focused on race and gender bias, with fewer studies of bias reduction strategies focused on

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39.   Indeed, in the United States, there has been a recent backlash in some states against teaching about racism in public schools. *See* Eesha Pendharkar, *Four Things Schools Won't Be Able to Do Under 'Critical Race Theory' Laws*, 40 EDUC. WK. 8 (2021). On the other hand, some states have passed laws requiring such instruction. *See* Sahar Akbarzai, *New Jersey is the Latest State to Require Schools to Offer Courses on Diversity and Unconscious Bias*, CNN (April 11, 2021). And some professions require instruction about diversity, equity, and inclusion. *See, e.g.,* EDUCATIONAL POL-ICY AND ACCREDITATION STANDARDS FOR BACCALAUREATE AND MASTER'S SOCIAL WORK PROGRAMS, ACCREDITATION STANDARD 2.0 (Council on Soc. Work Educ., 2022), https://www.cswe.org/getmedia/94471c42-13b8-493b-9041-b30f48533d64/2022-EPAS.pdf, *archived at* https://perma.cc/A9RT-7AQD. Recently, the American Bar Association added to its Standards for legal education a requirement that law students learn "about bias, cross-cultural competency and racism." *See* ABA STANDARDS AND RULES OF PROCEDURE FOR APPROVAL OF LAW SCHOOLS, STANDARD 303(C) (AM. BAR ASS'N 2022).

40.   This phrase was recently popularized, in the context of the Covid-19 pandemic, by Dr. Anthony Fauci, who posted the following statement on Twitter: "People want to fire me or put me in jail for what I've done. Mainly, follow the science." Carlie Porterfield, *Dr. Fauci on GOP Criticism: 'Attacks On Me, Quite Frankly, Are Attacks on Science'*, FORBES (June 9, 2021), https://www.forbes.com/sites/carlieporterfield/2021/06/09/fauci-on-gop-criticism-attacks-on-me-quite-frankly-are-attacks-on-science/?sh=4dd006e04542, *archived at* https://perma.cc/522A-7UBD.

other types of bias. We also found that most of the racial bias studies in the U.S. focused on bias against Black people as opposed to other people of color or indigenous people.

We used several selection criteria to decide which of the many available studies to include in the summaries below: (1) validity (e.g., are the findings similar to those of other studies, and therefore likely to be replicable?); (2) usefulness (e.g., how easily could the findings be adapted for use outside the laboratory or replicated in other field settings?); and (3) breadth (e.g., looking for studies of various types of bias). Also, in order to avoid the effects of publication bias,[41] we paid particular attention to studies in which attempted bias-reduction strategies produced little, if any, effect.

There are a few caveats regarding these studies. Only a few of them examine the durability of bias-reduction effects—a critical factor in our view[42]—or the impact of repeating a specific strategy or group of strategies over a long period of time. Further, as with much of the research in social psychology, the experimental subjects are often university students or faculty, and that may affect the extent to which these findings are generalizable.[43]

Finally, social psychologists are still exploring many of the conclusions reached in these studies. Accordingly, the conclusions that we reach in this review of the scientific literature are necessarily tentative and will no doubt require revision in the years ahead. However, we believe it is worthwhile to take stock of the state of knowledge today, distill that information into a usable summary, and utilize that information to devise practical strategies for bias reduction that can be implemented individually, in organizations, and in the practice of conflict resolution.

In the sections that follow, we describe each of the seven types of intervention, the research that shows the bias-reduction effect of those interventions, and our own observations about the usefulness

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41. *See generally* Abhijit S. Nair, *Publication Bias – Importance of Studies with Negative Results!*, 63 INDIAN J. ANESTHESIOLOGY. 505 (2019) (describing the reasons why researchers are more likely to publish findings that prove a research hypothesis than disprove it).

42. As individuals decide whether to try one or more of the bias reduction strategies described in this article, we believe it is reasonable for them to consider not only the durability of bias-reduction effects but also the robustness, or lack of robustness, of those effects.

43. *See* Paul H. P. Hanel & Katia C. Vione, *Do Student Samples Provide an Accurate Estimate of the General Public?*, PLOS ONE (Dec. 16, 2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5176168/, *archived at* https://perma.cc/M9MP-MBQR.

of that research, including comments about such factors as sample size and the representativeness (or lack of representativeness) of the participants in the research that bear on the value of that research.[44]

A. *Raising Awareness of Bias and the Impacts of Bias*

Researchers have found that simply raising an awareness of unconscious bias and the deleterious effects of bias can reduce such biases.

Experiments conducted at Rutgers University found that participation in an undergraduate course entitled "Prejudice and Conflict" reduced the students' implicit and explicit biases, as compared to when they began the course.[45] The course was taught by an African American professor. However, the researchers measured the extent to which students' biases were changed if they took a course on an unrelated subject from the same professor and found no change. Accordingly, they concluded that "the content of the . . . seminar, as well as its relatively intimate atmosphere, may have fostered the openness and appreciation for diversity necessary to enable the unlearning of implicit and explicit biases."[46] Unfortunately, this study did not measure the durability of these effects over time, and the researchers could not rule out the possibility that students in the experimental arm of the study were predisposed to be influenced by the course, because those students had volunteered to take the course. However, two of the core findings of this research—namely, the malleability of bias and the impact of raising awareness of bias—are significant.

A study of gender bias conducted by researchers at the University of Wisconsin involved 2,290 faculty members in 92 departments in medical, science, and engineering divisions of the university.[47] The results, which are also discussed in Part III(H) below, showed that an intervention designed to increase awareness of gender bias (a 2.5-hour workshop in which both the existence of gender bias and its

44.   For an overview of the social psychology research regarding bias reduction, see Rachel Godsill et al., *The Science of Equality, Volume 1: Addressing Implicit Bias, Racial Anxiety, and Stereotype Threat in Education and Healthcare,* PERCEPTION INST. (Nov. 2014), http://perception.org/wp-content/uploads/2014/11/Science-of-Equality.pdf., *archived at* https://perma.cc/JYZ8-CUXE.

45.   *See* Laurie Rudman et al., *"Unlearning" Automatic Biases: The Malleability of Implicit Prejudice and Stereotypes*, 81 J. PERSONALITY & SOC. PSYCH. 856, 856 (2001).

46.   *Id.* at 865.

47.   *See generally* Molly Carnes et al., *The Effect of an Intervention to Break the Gender Bias Habit for Faculty at One Institution: A Cluster of Randomized, Controlled Trial*, 90 J. ASS'N AM. MED. COLLS 221 (2015).

effects were studied) resulted in changed attitudes and behaviors among the faculty regarding gender equity. These changes included increased motivation to counteract gender bias and greater self-efficacy to promote change. Both male and female faculty reported an improved climate in their departments.[48] These effects were found three days after the workshop and also three months after the workshop.[49] The researchers reported that "[w]hen at least 25% of a department's faculty attended the workshop, self-reports of actions to promote gender equity increased significantly at three months."[50] Interestingly, unconscious gender bias—as measured by the IAT using a test that examined the association of male/female with the categories of leader/supporter—was largely unchanged, suggesting the durability of the bias that associates "male" with "leader" and "female" with "supporter."[51]

One of the things that both of these studies have in common is that the intervention—in one case, a semester-long course and in the other a 2.5-hour workshop—was more robust than simply a brief statement bringing the awareness of bias to the attention of the studies' participants. A contrary example—a study of juror behavior after the jurors were given a single paragraph-long instruction about the existence of bias and an admonition to avoid letting bias affect the jurors' decisions[52]—showed no change in the jurors' decision-making.[53]

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48. *Id.* at 226.

49. *Id.* at 222.

50. *Id.* at 226.

51. *Id.* at 227.

52. The jury instruction states: "Do not decide the case based on 'implicit biases.' As we discussed in jury selection, everyone, including me, has feelings, assumptions, perceptions, fears, and stereotypes, that is, 'implicit biases,' that we may not be aware of. These hidden thoughts can impact what we see and hear, how we remember what we see and hear, and how we make important decisions. Because you are making very important decisions in this case, I strongly encourage you to evaluate the evidence carefully and to resist jumping to conclusions based on personal likes or dislikes, generalizations, gut feelings, prejudices, sympathies, stereotypes, or biases. The law demands that you return a just verdict, based solely on the evidence, your individual evaluation of that evidence, your reason and common sense, and these instructions. Our system of justice is counting on you to render a fair decision based on the evidence, not on biases." Jury Instructions from Judge Mark Bennett (N.D. Iowa), Instruction No. 16, https://northerndistrictpracticeprogram.org/wp-content/uploads/2017/09/Bennett-Conduct-of-Jury-Instructions.pdf, *archived at* https://perma.cc/9SWR-57PR.

53. *See generally* Cynthia Lee, *Awareness as a First Step Toward Overcoming Implicit Bias*, in Enhancing Justice: Reducing Bias. 289 (Sarah Redfield et al., Eds. 2017).

An additional study examined whether the impact of raising awareness about gender bias and the effects of bias might be affected by the format in which the information was presented.[54] This research was done at Yale University, where thirty male undergraduates[55] were shown data about ten pairs of male and female employees—including their salary levels—working in ten different departments of a fictitious company to see whether the study's subjects noticed a pattern of salary discrimination against the women. When the participants in the study were given a fact sheet that aggregated the data for the company as a whole, they were far more likely to conclude that there was a pattern of discrimination, as compared with participants who saw ten information sheets—one for each employee. The conclusion of the researchers was that raising awareness of bias requires sensitivity to cognitive distortions, including being aware of one's resistance to seeing bias: "the desire to deny injustice . . . blinds many justice-loving individuals to the existence of discrimination."[56]

An obstacle in raising the awareness of bias is a well-established tendency of individuals to believe that their own judgments are less biased than those of others.[57] Therefore, techniques designed to raise awareness of bias should include education about this vulnerability to self-serving assessments that minimize our own biases despite the evidence that bias is widespread.

Based on the studies described above, one might reasonably conclude that interventions designed to raise awareness of bias and the effects of bias need to be (1) robust (i.e., the information presented needs to unambiguous); (2) participatory (unlike the one-way communication exemplified by jury instructions); (3) sustained over time (since the durability of such interventions is uncertain); and (4) designed to include information about our psychological defenses to recognizing our own biases.

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54. *See generally* Faye Crosby et al., *Cognitive Biases in the Perception of Discrimination: The Importance of Format*, 14 SEX ROLES 637 (1986).

55. The researchers, a majority of whom were women, decided to use male subjects because "we had encountered a ceiling effect in a pretest with female subjects, whereby they tended to give high ratings of discrimination (6 or 7 on a 7-point scale) to all departments." In other words, there was a wider variation in the perception of discrimination among the male participants. *Id.* at 639.

56. *Id.* at 645.

57. *See* Joyce Ehrlinger et al., *Peering into the Bias Blind Spot: People's Assessments of Bias in Themselves and Others*, 31 PERSONALITY & SOC. PSYCH. BULL. 680, 680 (2005); *see generally* Emily Pronin, *Perception and Misperception of Bias in Human Judgment*, 11 TRENDS COGNITIVE SCI. 37 (2007) (summarizing research showing that people tend to recognize other people's bias but deny their own).

B. *Increasing Motivation to Counteract Bias*

Researchers have identified a second important method of reducing unconscious bias – fostering the motivation to be unbiased. As described below in this section, internal motivation appears to have a greater bias-reduction effect than external motivation.

A study by Stewart et al. (2008) established that the activation of intentions may be effective for controlling race bias: "automatic stereotyping was reduced when [White] participants made an intention to think specific counter-stereotypical thoughts whenever they encountered a Black individual."[58] This effect is significantly more pronounced in people who are internally motivated to be unbiased as compared with people who are externally motivated.[59]

"External motivation comes from the desire for approval or rewards or to avoid negative sanctions," according to Duke Law School professor Katharine Bartlett in her extensive review of the social science literature on bias reduction.[60] By contrast, "[i]nternal motivation comes from within the individual's personal values and identity structure."[61] Bartlett goes on to note that "people respond to both, often at the same time."[62] However, in the studies described below, researchers have endeavored to look separately at internal versus external motivation.

One question that arises from these studies is: What can be done to promote internal motivation to be unbiased? In a study of race bias at the University of Wyoming, researchers found that activation of "egalitarian goals" (for example, fair allocation of resources) is associated with increased internal motivation to be unbiased.[63] What,

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58. Brandon D. Stewart & B. Keith Payne, *Bringing Automatic Stereotyping Under Control: Implementation Intentions as Efficient Means of Thought Control*, 34 PERSONALITY & SOC. PSYCH. BULL. 1332, 1332 (2008).

59. *See* Jack Glaser & Eric D. Knowles, *Implicit Motivation to Control Prejudice*, 44 J. EXPERIMENTAL SOC. PSYCH. 164, 171 (2008); David M. Amodio et al., *Individual Differences in the Regulation of Intergroup Bias: The Role of Conflicting Monitoring and Neural Signals for Control*, 94 J. PERSONALITY & SOC. PSYCH. 60, 71 (2008); *see also* Patricia D. Devine et al., *The Regulation of Explicit and Implicit Race Bias: The Role of Motivations to Respond Without Prejudice*, 82 J. PERSONALITY & SOC. PSYCH. 835, 836 (2002) (discussing implications for the development of effective self-regulation of race bias).

60. Katharine T. Bartlett, *Making Good on Good Intentions: The Critical Role of Motivation in Reducing Implicit Workplace Discrimination*, 95 VIRGINIA L. REV. 1897, 1930 (2009), https://perma.cc/CCV8-SSCT.

61. *Id.*

62. *Id.*

63. *See* Michael John et al., *Internal Motivation to Respond Without Prejudice and Automatic Egalitarian Goal Activation*, 44 J. EXPERIMENTAL SOC. PSYCH. 1514, 1514 (2008). *See also* Gordon Moskowitz & Peizhong Lei, *Egalitarian Goals Trigger*

then, promotes the development of egalitarian goals? There are likely many answers to that question, including raising awareness of the unfair allocation of resources in society based on race and other invidious distinctions, some of which are described in Part I. In addition, perspective-taking—one of the de-biasing techniques described in Part III(F)—has been found to enhance egalitarian goals and internal motivation to be unbiased.[64]

Three other points are worth noting with regard to motivation. First, one study found that cognitive depletion leads people to react in stereotypical ways, especially when forced to make a hasty decision, but less so in people who are internally motivated to be unbiased.[65] This conclusion is supported by another study which measured how people operationalize race stereotypes in a simulated "shooter" experiment, in which subjects had to make split-second decisions about whether an image flashed on the screen was dangerous or not; people with higher levels of internal motivation were less likely to react in stereotypical ways, as compared with people who were externally motivated to be unbiased.[66]

Second, priming techniques can affect the way in which motivations are activated. In a study about inducing internal motivation, researchers found that priming White participants to think about a Black person as someone who would be on the same team with them resulted in a reduction of implicit bias.[67] This research suggests that encouraging a positive connection with an "outgroup" member might be a more successful strategy with regard to unconscious bias than trying to suppress negative thoughts about those members.

Third, the use of motivational interventions can backfire: in some instances, "inducing *extrinsic* [as opposed to intrinsic] motivations to regulate prejudice . . . can lead to greater implicit racial

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Stereotype Inhibition: A Proactive Form of Stereotype Control, 47 J. EXPERIMENTAL SOC. PSYCH. 103, 103 ("participants with egalitarian goals exhibit stereotype inhibition, and this occurs despite the fact that they lack awareness of the inhibition and lack the conscious intent to inhibit stereotypes at the time the response is made.").

64.   *See* Adam D. Galinsky, *Perspective-Taking: Decreasing Stereotype Expression, Stereotype Accessibility, and In-Group Favoritism*, 78 J. PERSONALITY & SOC. PSYCH. 708, 720 (2000).

65.   *See* Sang Hee Park et al., *Implicit Motivation to Control Prejudice Moderates the Effect of Cognitive Depletion on Unintended Discrimination*, 26 SOC. COGNITION 401, 415–17 (2008).

66.   *See* Glaser & Knowles, *supra* note 59, at 171.

67.   *See* Samuel L. Gaertner & John F. Dovidio, *Understanding and Addressing Contemporary Racism: From Aversive Racism to the Common Ingroup Identity Model*, 61 J. SOC. ISSUES 615, 633 (2005).

prejudice."[68] In our view, more research is needed to identify the conditions under which such unwanted results occur.

C. *Encouraging Individuation*

A third bias-reduction technique that researchers have discovered is individuation— enabling people to see others more three-dimensionally, as opposed to seeing them as defined solely by an identity, such as race, gender, or disability.

In one such study at Rutgers University, a cohort of White, Latinx, and Asian college students were asked to review the college applications of high school students.[69] The fictitious applicants were given stereotypically White-sounding or Black-sounding names.[70] When the study's participants were given no information about the applicants other than their name and hometown, the participants' predictions of the academic performance of the applicants reflected a strong racial bias against the Black applicants. However, when the participants were given detailed information about the applicants (such as their GPA and class rank; their SAT scores in reading, math, and writing; awards received; their high school sports and other activities; and their race), the salience of race disappeared.[71]

A similar phenomenon was seen in a field experiment involving Airbnb property owners. The researchers found that the property owners were less likely to accept guests with names that sounded Black, but that this bias was eliminated when individuating information was provided in the form of an online rating of the prospective guest by another purported host.[72]

In another study of individuation, researchers at the University of Victoria examined the "other-race effect"—the much-studied ability of people to differentiate the faces of individuals of their own race more accurately than the faces of other-race individuals.[73] One group of White subjects was shown photographs of faces and asked to

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68. *See* Calvin Lai, Kelly Hoffman & Brian Nosek, *Reducing Implicit Prejudice*, 7 Soc. & Personality Psych. Compass 315, 318–19 (2013).

69. *See generally* Rachel Rubinstein et al., *Reliance on Individuating Information and Stereotypes in Implicit and Explicit Person Perception*, 75 J. Experimental Soc. Psych. 54 (2018).

70. The researchers categorized the names as being prototypically Black-sounding or White-sounding based on a pilot survey. *See id.* at 59.

71. *See id.*

72. Ruomeng Cui et al., *Reducing Discrimination with Reviews in the Sharing Economy: Evidence from Field Experiments on Airbnb*, Mgmt. Sci. (Jan. 9, 2017).

73. *See generally* Sophie Lebrecht et al., *Perceptual Other-Race Training Reduces Implicit Racial Bias*, PLOS ONE (Jan. 21, 2009).

categorize the faces as either Caucasian, Asian, or African American; this group showed no reduction in race bias after performing the task. A second group of White subjects was shown the same photographs of faces and provided with training on how to differentiate the African American faces depicted in the photographs; this group showed a marked reduction in implicit racial bias after completing the training.[74]

Insight about the value of individuation can also be gleaned from another study of racial bias, in which researchers measured non-Black participants' attitudes toward Black people.[75] The researchers found that participants varied in their beliefs about the "variability" of traits among Black people: participants who saw Black people, as a group, as a more heterogenous group expressed less biased views about Blacks, and the opposite was true—i.e., participants who perceived Black people as more homogenous as a group expressed more biased attitudes.[76]

In related research, individuation has proven to be useful in a setting in which the stakes could not possibly be higher—representing defendants in death penalty cases. In such cases, according to an analysis in the Hofstra Law Review, defense lawyers found greater success when they provided the jury with information about the defendant's life story, including the challenges the defendant faced—as opposed to emphasizing clinical diagnoses of the defendants, which tended to reinforce stereotypes. Individuation, the authors concluded, helped to overcome jurors' unconscious bias.[77]

The overall conclusion from these studies is that individuation—seeing people more three-dimensionally—can counteract unconscious bias with even a minimal intervention, such as teaching participants to differentiate other-race faces. The data also suggest that the more

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74. *Id.* at 3.

75. *See generally* Alan J. Lambert et al., *On the Predictive Validity of Implicit Attitude Measures: The Moderating Effect of Perceived Group Variability*, 41 J. Experimental Soc. Psych. 114 (2005).

76. *See id.* at 125. For example, "[p]articipants were asked to imagine, out of a sample of 100 Blacks selected randomly from the population, how many Blacks they would assign a rating of '0' with respect to likeableness, how many they would assign a '1', and so on up to 10. Computation of the standard deviation of each resulting distribution for each participant constituted our operationalization of perceived group variability." *Id.* at 119.

77. *See* Sean D. O'Brien & Kathleen Wayland, *Implicit Bias and Capital Decision-Making: Using Narrative to Counter Prejudicial Psychiatric Labels*, 43 Hofstra L. Rev. 751, 772–80 (2015).

information we have about people, the more robust this effect is likely to be.[78]

D.   *Fostering Perspective-Taking and Empathy*

Researchers have used a variety of techniques to induce empathy and perspective-taking—i.e., seeing the world through the eyes of those who are subjected to biased perceptions—and measure the impact of those techniques in reducing bias. This section describes that research and the various media that have been studied as perspective-taking interventions: (1) taped narrative, (2) TV news documentary, (3) movie clip, (4) virtual reality device, and (5) journaling.

1.   *Taped Narrative*

In a 1997 experiment, the study participants listened to a taped narrative read by a woman who had contracted AIDS.[79] In one arm of the study, participants were asked to "take an objective perspective toward what is described." In another arm of the study, participants were asked to "try to feel the full impact of what this woman has been through and how she feels as a result."[80] After this empathy-inducing intervention, the second group showed less bias toward the narrator (as compared with the first group) and also a reduced bias toward people with AIDS.[81]

2.   *TV News Documentary*

In a 2004 experiment, study participants were shown a segment of an ABC television documentary[82] in which two young men—one White and one Black—were seen from the vantage point of a hidden camera shopping at a record store, looking for an apartment to rent,

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78.   *See, e.g.*, Cui et al., *supra* note 72, at 28 (finding that racial bias exhibited by Airbnb hosts was reduced by adding individuating information to the profiles of potential guests).

79.   *See* C. Daniel Batson et al., *Empathy and Attitudes: Can Feeling for a Member of a Stigmatized Group Improve Feelings Toward the Group?*, 72 J. PERSONALITY & SOC. PSYCH. 105, 108 (1997).

80.   *Id.*

81.   *See id.* at 109–110. A subsidiary finding was that the bias was reduced less if the participants were told that the woman had contracted AIDS because of risky behavior as opposed to innocently contracting AIDS from a blood transfusion or medical procedure. *See id.* at 117.

82.   Racial Bias in St. Louis Revealed Via Hidden Camera – Diane Sawyer Primetime 1991, YOUTUBE (July 10, 2015), https://www.youtube.com/watch?v=8XprcqeZ5-E, *archived at* https://perma.cc/WJC3-PUA9.

and shopping for a car.[83] The documentary showed repeated in-stances of racist treatment of the Black man. One group of study par-ticipants were instructed to "try to imagine how . . . the African American in the documentary feels about what is happening and how it affects his life," while a second group is instructed to "try to take an objective perspective toward what is described," and a third group was given no instructions. There was significant racial bias reduc-tion in the first group but none in the other two.[84]

3. *Movie Clip*

In a 2009 study, undergraduates at the University of Michigan—primarily White, but also including Black and Latinx participants—watched a clip from the 1993 movie "Joy Luck Club" (described by the researchers as "a movie depicting the experiences of Asian Americans from the main character's perspective") to examine whether it would reduce bias against Asian Americans.[85] In the experimental arm of the experiment, participants were instructed to "imagine yourself in the position of the main character"; in the control arm, participants were instructed to "imagine what a newspaper reviewer might think of the clip."[86] Then both groups of participants were asked to review the college applications of (fictitious) individuals—some identified as White and some as Asian. Participants in the experimental arm viewed the Asian applicants as more likable than did the participants in the control arm.[87] The researchers then went further and added (fictitious) Black college applicants to the experiment, to see whether the reduced anti-Asian bias found among the "perspective-taking" group would result in less bias against Black people, and the answer was no.[88] However, a follow-up study in 2013 involving the same

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83. *See* John F. Dovidio et al., *Perspective and Prejudice: Antecedents and Mediat-ing Mechanisms*, 30 PUBMED 1537, 1539–40 (2004).

84. This result seems particularly surprising since the documentary itself is a powerful depiction and indictment of racism and therefore one might have expected some effect from the film's raising an awareness of bias. *See supra* Part III(A).

85. *See* Margaret Shih et al., *Perspective Taking: Reducing Prejudice Towards General Outgroups and Specific Individuals*, 12 GRP. PROCESSES & INTERGROUP RELS. 565, 566 (2009) ("The clip features June, the main character, discussing the dilemma involved with the difficulty of growing up American while being held to more tradi-tional Asian standards with her mother.").

86. *Id.* at 567.

87. *Id.* at 568.

88. *Id.* at 570.

lead researcher and the same experimental setup showed that inducing empathy for the Asian character in the film resulted in less explicit and implicit bias against outgroup members generally—not just Asians.[89]

4. *Virtual Reality Device*

A 2021 study involving the use of a virtual reality headset explored the question of whether seeing oneself as a member of a racial outgroup would, by itself, reduce race bias.[90] The researchers found that there was an increase in empathy but no change in race bias—implicit or explicit—and therefore we would not recommend the use of this technique.[91]

5. *Journaling*

One other study about perspective-taking is worth noting. In 2011, researchers examined the question of whether perspective-taking would counteract the denial of intergroup discrimination.[92] Participants in this study included White and Asian undergraduates who were asked to spend five minutes writing about a day in the life of a randomly assigned (fictitious) Black person, Latinx person, or White person. One group was asked to "vividly imagine what the target person might be thinking, feeling, and experiencing during the day," while a control group was asked to "not get caught up in what the target person might be thinking, feeling, and experiencing during the day, but rather, to write as though they were a casual observer." Not surprisingly, the "perspective-taking" group was more inclined to rate discrimination as a more plausible explanation for racial inequality than lack of motivation.

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89.   *See generally* Margaret J. Shih et al., *Perspective-Taking and Empathy: Generalizing the Reduction of Group Bias Towards Asian Americans to General Outgroups*, 4 Asian Am. J. Psych. 79 (2013).

90.   *See generally* Rémi Thériault et al., *Body Swapping with a Black Person Boosts Virtual Reality to Embody Another*, 74 Q. J. Exp. Psych. 2057 (2021).

91.   An additional concern with this technique is that it could remind people of "blackface" (white people darkening their skin), which became popular in the U.S. as white performers played characters that dehumanized African Americans. *See* Alexis Clark, *How the History of Blackface Is Rooted in Racism*, History (Feb. 15, 2019) ("The portrayal of blackface . . . is steeped in centuries of racism. It peaked in popularity during an era in the United States when demands for civil rights by recently emancipated slaves triggered racial hostility. And today, because of blackface's historic use to denigrate people of African descent, its continued use is still considered racist.").

92.   *See generally* Andrew R. Todd et al., *Perspective Taking Combats the Denial of Intergroup Discrimination*, 48 J. Experimental Soc. Psych. 738 (2012).

The studies suggest that there are many ways to induce empathy and perspective-taking. Furthermore, it might be reasonable to surmise that the vividness, frequency, and duration of such interventions may correlate with the extent of the impact on bias.

E. *Increasing Contact with "Outgroup" Members*

In this section, we examine a fifth type of bias-reducing intervention: contact with "outgroup" members. Several forms of intergroup contact—direct, vicarious, imagined, and media contact—have proven to be effective. In these studies, direct contact means in-person connection, especially when it is peer-to-peer contact. Vicarious contact involves the observation of a fellow ingroup member having contact with a member of an outgroup. Imagined contact involves asking people to imagine a set of interactions with an outgroup member, such as performing a shared task. Media contact means exposure to images and stories of people who belong to an outgroup.[93]

1. *Direct Contact*

In his pioneering 1954 book, *The Nature of Prejudice*, psychologist Gordon Allport argued that contact with outgroup members can be a highly effective way to reduce bias under certain conditions.[94] Allport proposed that optimal intergroup contact would involve people of "equal status, [would] include cooperation to achieve common goals, and should be supported by important societal institutions."[95]

A host of "contact studies" ensued, and in 2006, Pettigrew et al. undertook a meta-analysis of 515 such studies regarding intergroup contact and found that intergroup contact reliably decreases intergroup prejudice.[96] In addition, the researchers found that intergroup contact not only generalizes to the entire outgroup (i.e., beyond the

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93. *See generally* John F. Dovidio et al., *Improving Intergroup Relations Through Direct, Extended and Other Forms of Indirect Contact*, 14 Grp. Processes & Intergroup Rels. 147 (2011); Blake M. Riek et al., *Intergroup Threat and Outgroup Attitudes: A Meta-Analytic Review*, 10 Personality & Soc. Psych. Rev. 336 (2006).

94. Gordon W. Allport, The Nature of Prejudice 261–81 (1954). *See also* Lee, *supra* note 53, at 290 (noting that one limitation of this early work on the subject is that Allport relied largely on conscious action and self-reporting).

95. Rhiannon N. Turner & Richard J. Crisp, *Imagining Intergroup Contact Reduces Implicit Prejudice*, 49 Brit. J. Soc. Psych. 129, 130 (2010) (summarizing Allport's conclusions).

96. *See generally* Thomas F. Pettigrew & Linda R. Tropp, *A Meta-Analytic Test of Intergroup Contact Theory*, 90 J. Personality & Soc. Psych. 751 (2006). *See also* Kristin Davies et al., *Cross-Group Friendships and Intergroup Attitudes: A Meta-Analytic Review*, 15 Personality & Soc. Psych. Rev. 332, 332 (2011) (noting that "cross-group friendships are especially powerful forms of intergroup contact"); *id.* at 345

immediate outgroup participants of the study) but also can lead to a decrease in prejudice toward other outgroups.

In 2007, Turner et al. found that self-disclosure was a key component of the type of contact that reduces bias.[97] In 2012, Tadmor et al. showed that intergroup contact reduces bias by means of greater liking, being less afraid of "the unknown," and higher levels of empathy with the outgroup—suggesting that emotional factors are crucial, rather than mere knowledge of the outgroup.[98] This study also showed that exposure to multicultural experiences (as opposed to monocultural experiences of solely one's own or another culture) leads to a decrease in stereotypes, as well as changes in behavior (for example, reduction in discriminatory hiring decisions).

A related study showed that the bias-reduction effects of intergroup contact may be due in some contexts to "social tuning"—the tendency to adopt other people's attitudes or what we believe their attitudes to be.[99] In this study, for example, "European Americans (but not Asian Americans) exhibited less automatic prejudice in the presence of a Black experimenter than a White experimenter."[100]

One of the fascinating aspects of "contact theory" is that, under some circumstances, intergroup interactions can increase bias.[101] McKeown et al. (2017) point out that "in everyday life, contact may be construed as a negative experience that increases rather than decreases responses such as prejudice, anxiety, and avoidance."[102] In addition, they contend, "in real-life settings, contact is often circumscribed by informal practices of (re)segregation that are easily overlooked if researchers rely primarily on examining structured contact

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(noting that "cross-group friendships appear to promote positive intergroup attitudes," and the favorable impact on implicit and explicit attitudes is similar).

97. *See* Rhiannon Turner, et al., *Reducing Explicit and Implicit Outgroup Prejudice Via Direct and Extended Contact: The Mediating Role of Self-Disclosure and Intergroup Anxiety*, 93 J. PERSONALITY & SOC. PSYCH. 369, 369 (2007).

98. *See generally* Carmit T. Tadmor et al., *Multicultural Experiences Reduce Intergroup Bias Through Epistemic Unfreezing*, 103 J. PERSONALITY & SOC. PSYCH. 750 (2012).

99. *See* Brian S. Lowery et al., *Social Influence Effects on Automatic Racial Prejudice*, 81 J. PERSONALITY & SOC. PSYCH. 842, 843 (2001).

100. *Id.*

101. *See, e.g.*, Fiona Barlow et al., *The Contact Caveat: Negative Contact Predicts Increased Prejudice More Than Positive Contact Predicts Reduced Prejudice*, 38 PERSONALITY & SOC. PSYCH. BULL. 1629, 1629 (2012) (stating that "negative contact may be more strongly associated with increased racism and discrimination than positive contact is with its reduction").

102. *See* Shelley McKeown & John Dixon, *The "Contact Hypothesis": Critical Reflections and Future Directions*, 11 SOC. & PERSONALITY PSYCH. COMPASS 1, 1 (2017).

and explicit processes using primarily laboratory and questionnaire methods."[103]

MacInnis et al. (2015)[104] address this tension by offering a mathematical model of when intergroup "interaction" (which is often associated with heightened stress, intergroup anxiety, or outgroup avoidance) reaches a critical mass of *positive* intergroup "contact" (which is often associated with bias reduction and lower intergroup anxiety). According to the researchers, once this threshold is reached, "positive outcomes are maintained through the ongoing facilitation of positive intergroup interactions by past intergroup contact."[105]

2. *Extended or Vicarious Contact*

According to the "extended contact hypothesis," first introduced by Wright et al. (1997), the mere knowledge that an ingroup member has a close, positive relationship with an outgroup member can reduce intergroup bias.[106] The researchers found evidence that personally having cross-group friends is not necessary and that knowing about an ingroup member who has an outgroup friend improves attitudes toward the outgroup as a whole.[107]

The impact of vicarious contact is enhanced, according to research by Dovidio et al. (2010) when the ingroup member observes another ingroup member interact with an outgroup member: "Viewing (as opposed to merely knowing about) a positive interaction between an ingroup member and an outgroup member constitutes vicarious intergroup contact, and it produced, as predicted, more positive intergroup attitudes than did control conditions."[108]

A meta-analysis by Zhou et al. covers 20 years of research (115 studies) and confirmed the extended contact hypothesis and showed

103. *Id*.

104. *See generally* Cara C. MacInnis & Elizabeth Page-Gould, *How Can Intergroup Interaction be Bad if Intergroup Contact is Good? Exploring and Reconciling an Apparent Paradox in the Science of Intergroup Relations*, 10 PERSPECTIVES ON PSYCH. SCI. 307 (2015).

105. *Id.* at 313 (citing Jeffrey R. Binder et al., *Where is the Semantic System? A Critical Review and Meta-Analysis of 120 Functional Neuroimaging Studies*, 19 CEREBRAL CORTEX 2767 (2009); Pettigrew & Tropp, *supra* note 96.)

106. *See generally* Aron Wright et al., *The Extended Contact Effect*: *Knowledge of Cross-Group Friendships and Prejudice,* 73 J. PERSONALITY & SOC. PSYCH. 73 (1997)*.*

107. *See id.* at 79.

108. *See* Dovidio et al*., supra* note 93 (citing Robyn K. Mallett & Timothy D. Wilson, *Increasing Positive Intergroup Contact*, 46 J. EXPERIMENTAL SOC. PSYCH. 383 (2010)).

that the magnitude of this effect was on a par with direct friendship as a factor in improving cross-group attitudes.[109]

Social networking sites provide an important context for vicarious intergroup contact. Using an online survey, Barker et al. tried to understand the potential impact of vicarious intergroup contact via social media sites "on attitudes to and expectancies about interactions with racial outgroup members."[110] The study established that intergroup contact via social networking browsing, by itself, had no impact on racial prejudice reduction, but that when such browsing also involved self-reported perspective-taking, bias was reduced.

3. *Imagined Contact*

In a 2010 study, Turner et. al went a step further and tested the impact of imagined contact.[111] The authors demonstrated in three experiments that imagining intergroup contact leads to improved attitudes toward outgroup members and a decrease in unconscious bias toward those outgroup members. Participants were asked to imagine meeting an outgroup member before reporting their overall general feelings toward members of the outgroup. It was found to be crucial that participants imagined a concrete encounter with an outgroup member rather than just envisioning an outgroup member without the interaction component.[112] The authors also found that it was more beneficial for participants to imagine a positive interaction with an outgroup member rather than just a neutral encounter.

In the first experiment, young participants who imagined having an interaction with an elderly person showed decreased levels of age bias. In the second experiment, non-Muslim participants who imagined talking to a Muslim stranger subsequently showed more positive implicit attitudes toward Muslims than the control group. And, in the third experiment, heterosexual men were asked to imagine an encounter with a gay man, and they reported having more positive feelings toward gay men and less intergroup anxiety than the control group.

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109. *See* Shelly Zhou et al., *The Extended Contact Hypothesis: A Meta-Analysis on 20 Years of Research*, 23 PERSONALITY & SOC. PSYCH. REV. 132, 132 (2019).

110. *See* Valerie Barker, *Is Contact Enough? The Role of Vicarious Contact with Racial Outgroups via Social Networking Sites* 1 (Manuscript presented to Intergroup division for the annual International Communication Association conference in Phoenix, Arizona, May 2012), https://www.researchgate.net/publication/301346626_Is_contact_enough_The_Role_of_Vicarious_Contact_with_Racial_Outgroups_via_Social_Networking_Sites, *archived at* https://perma.cc/KUR5-ZH4E.

111. *See generally* Turner & Crisp, *supra* note 95.

112. *See id.* at 131–32.

In 2013, Miles et al. published a meta-analytical study of the "imagined contact" hypothesis.[113] They reviewed more than 70 studies which "showed that imagining a positive interaction with an outgroup member can reduce prejudice and encourage positive intergroup behavior."[114] Imagined contact results in significantly reduced intergroup bias in attitudes, emotions, intentions, and behavior, and the effect was significant across a broad range of target outgroups and contexts.[115] The effect was equally strong for explicit and implicit attitude measures. Not surprisingly, the effect was stronger when participants were instructed to elaborate on the context within which the imagined interaction took place. "The imagined contact effect was also stronger for children than for adults, supporting the proposition that imagined contact is a potentially key component of educational strategies aiming to promote positive social change."[116]

4. *Media Contact*

The extent to which bias can be reduced via media contact with outgroup members has not been fully studied[117] even though there is substantial overlap between this approach to bias reduction and the strategy of promoting empathy and perspective taking.

For example, in one study, viewing a documentary about the life and death of a prominent gay politician had a significant and positive effect on the attitudes of participants toward gay men.[118] Another researcher, however, found that media contact was less impactful than person-to-person contact in reducing bias.[119] In that study, however, the media images to which participants had been exposed from an early age contained an abundance of negative stereotypes of outgroup members.[120]

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113. *See generally* Eleanor Miles & Richard J. Crisp, *A Meta-Analytic Test of the Imagined Contact Hypothesis*, 17 GRP. PROCESSES & INTERGROUP RELS. 3 (2013).

114. *Id.* at 3.

115. *See id.*

116. *See id.*

117. *See* Elizabeth Levy Paluck et al., *Prejudice Reduction: Progress and Challenges,* 72 ANN. REV. PSYCH. 533, 536 (2021).

118. *See* Ellen D. B. Riggle et al., *The Impact of "Media Contact" on Attitudes Toward Gay Men*, 31 J. HOMOSEXUALITY 55, 59 (2010). The film was the 88-minute Oscar-winning documentary, "The Times of Harvey Milk." Milk was one of the first openly gay elected officials in the United States. *Id.*

119. *See* Ramasubramanian, *supra* note 13, at 54.

120. *Id.*

In another study, a researcher examined the impact of two radio programs in war-torn Rwanda in 2009 (radio being the most important form of mass media at that time in Rwanda).[121] One of the programs—a soap opera—conveyed positive messages about intergroup contact, while the other program (a soap opera about health issues) conveyed no messages about intergroup contact.[122] Study participants who were asked to listen to the first of these programs experienced an increase in positive attitudes about intergroup contact, but there was no change in their personal beliefs regarding prejudice, violence, and trauma.[123]

F. *Stereotype Negation / Replacement*

This section describes a sixth type of bias-reducing intervention: stereotype negation and replacement. As noted in Part I of this article, unconscious bias has two components: (a) attitudes and (b) stereotypes. Attitudes can be positive, negative, or neutral, whereas a stereotype "is a specific trait that is probabilistically associated with a category," as explained by researcher Jerry Kang.[124] Kang uses the example of dogs and cats: people may have positive or negative attitudes about dogs and cats (e.g., liking vs. disliking them), and they might also have stereotypes about them (e.g., loyal vs. aloof).[125] As applied to people, stereotypes are usually unwelcome, even if they are positive, because they implicitly deny the individuality of the person being stereotyped. Negative stereotypes are even more unwelcome because they are commonly used to marginalize or oppress people stereotypically associated with a trait. Katharine Bartlett expressed it succinctly: "Stereotypes are categories that constrain and shape what a person believes about, and expects from, other people."[126]

The sections that follow address (1) the extent to which stereotypes are malleable, (2) techniques for raising awareness of stereotypes, and (3) strategies for counteracting or eliminating stereotypes.

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121. *See generally* Elizabeth L. Paluck, *Reducing Intergroup Prejudice and Conflict Using the Media: A Field Experiment in Rwanda*, 96 J. PERSONALITY & SOC. PSYCH. 574 (2009).

122. *See id.* at 577.

123. *See id.* at 582–83.

124. Jerry Kang, *What Judges Can Do About Implicit Bias*, 57 CT. REV. 78, 78 (2021).

125. *Id.* at 78–79.

126. Bartlett, *supra* note 60, at 1908.

1. *Malleability of Stereotypes*

One of the challenges in managing stereotypes is that they are a form of "automatic" thinking: they spring to mind even if they represent a view that our conscious minds find abhorrent. Researcher Irene Blair summarizes one aspect of the problem of malleability as follows: "[T]he belief that automatic associations are deep seated and impervious to strategic efforts [to dislodge them] has contributed to the idea that such associations represent people's true attitudes."[127]

However, a large body of research summarized by Blair establishes the malleability of stereotypes—the ability of individuals to suppress or avoid the activation of a learned stereotype when presented, or interacting, with someone from the target group.[128] The tools for doing so arise from "(a) perceivers' motivation to maintain a positive self-image or have positive relationships with others, (b) perceivers' strategic efforts to reduce stereotypes or promote counterstereotypes, (c) perceivers' focus of attention, and (d) contextual cues."[129]

2. *Raising Awareness of Stereotypes*

The automaticity of stereotypical thinking and its conformity to prevailing norms can sometimes make stereotypes invisible. Researchers have found the use of certain riddles, like the one below, to be useful in alerting individuals to these invisible stereotypes:

> A father and his son driving together in their car have a terrible car accident. The father dies upon impact. The son is rushed to the hospital in an ambulance and is immediately brought to the operating table. The doctor takes a quick look at him and says that a specialist is needed. The specialist comes, looks at the young man on the operating table and proclaims, I cannot operate on him, he is my son.[130]

Who is the specialist? The answer, of course, is the "young man's mother."[131] But in a 2004 study that included both male and female participants, only 32% were able to provide the correct answer,

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127. Irene V. Blair, *The Malleability of Automatic Stereotypes and Prejudice*, 6 PERSONALITY & SOC. PSYCH. REV. 242, 243 (2002).

128. *Id.* at 244–47.

129. *Id.* at 243. See also Aiden P. Gregg et al., *Easier Done Than Undone: Asymmetry in the Malleability of Implicit Preferences*, 90 J. PERSONALITY & SOC. PSYCH. 1, 14-17 (2006).

130. *See* Heidrun Stoeger et al., *What is a Specialist? Effects of the Male Concept of a Successful Academic Person on Performance in a Thinking Task*, 46 PSYCH. SCI. 514, 515 (2004).

131. *Id.*

whereas 80% provided the correct answer when the genders of the parents were reversed.[132] Other researchers have used several other gender-stereotype riddles in their studies[133] and reported that many of the participants described themselves as "free of stereotyping, but the demonstration opened their eyes to how influential stereotypes can be on their cognitions and behaviors."[134]

Kawakami et al. (2007) tested a stereotyping intervention in a simulated hiring experiment in which an applicant was seeking a supervisory position that required leadership and managerial skills.[135] The (fictitious) applicants included both men and women.[136] In the experimental arm of the study, participants took a training designed to raise awareness of male and female stereotypes; a control group had no such training.[137] Not surprisingly, the first group hired substantially more women than the second.[138] "Training and correction processes not only influenced general decisions to hire or not hire a male or a female candidate for a leadership position but also influenced the extent to which particular gender traits were ascribed to men and women" during the hiring process.[139]

3. *Counteracting or Replacing Stereotypes*

A well-tested technique for counteracting the effects of stereotypes, including internalized stereotypes, is the use of counter-stereotypic images. For example, a 2010 study by Good et al. looked at the effect of gender stereotypic and counter-stereotypic images in science

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132. *See* Jeanine Lee McHugh Skorinko, *Riddle Me This: Using Riddles that Violate Gender Stereotypes to Demonstrate the Pervasiveness of Stereotypes*, 17 Psych. Learning & Teaching 194, 195 (2018) (citations omitted); *see also* Eimear E. Finnegan et al., *Counter-Stereotypical Pictures as a Strategy for Overcoming Spontaneous Gender Stereotypes*, 6 Frontiers Psych. 1 (2015) (citing Jane Oakhill et al., *Immediate Activation of Stereotypical Gender Information*, 33 Memory & Cognition 972 (2005)).
133. *See, e.g.*, Jeanine Lee McHugh Skorinko, *supra* note 132.
134. *Id.* at 205.
135. *See generally* Kerry Kawakami et al., *The Impact of Counterstereotypic Training and Related Correction Processes on the Application of Stereotypes*, 10 Grp. Processes & Intergroup Relations 139 (2007).
136. *Id.* at 142.
137. *Id.*
138. *Id.* at 146.
139. *Id.* at 148. *See also* Kerry Kawakami et al., *Just Say No (to Stereotyping): Effects of Training in the Negation of Stereotypic Associations on Stereotype Activation*, 78 J. Personality & Soc. Psych. 871 (2000); Mark Graham et al., *Science Faculty's Subtle Gender Biases Favor Male Students*, 109 Proc. Nat'l Acad. Sci. 16474 (2012); Frances Trix & Carolyn Psenka, *Exploring the Color of Glass: Letters of Recommendation for Female and Male Medical Faculty*, 14 Disclosure & Soc'y 191 (2003).

textbooks for high school students.[140] The results showed that "female students had higher comprehension after viewing counter-stereotypic images (female scientists) than after viewing stereotypic images (male scientists). Male students had higher comprehension after viewing stereotypic images than after viewing counter-stereotypic images."[141]

Dasgupta and Greenwald (2001) examined whether exposure to pictures of admired people and disliked people (some White, some Black, some older, and some younger) would influence implicit or explicit attitudes based on race or age.[142] The researchers found that exposure to images of admired Black individuals (for example, Denzel Washington) and disliked White individuals (for example, Jeffrey Dahmer) reduced unconscious bias against Blacks.[143] They likewise found that exposure to images of admired older people (for example, Mother Teresa) and disliked younger people (for example, Tonya Harding) reduced unconscious bias against older people.[144] Interestingly, however, these interventions did not affect *explicit* racial or age-related biases.[145]

Three other studies on counter-stereotyping strategies are worth noting. First, Blair et al. (2001) investigated a strategy based on focused mental imagery.[146] Using both men and women as study participants, researchers found a reduction in gender-based stereotypes after asking people to imagine what a strong woman is like, why she is considered strong, what she is capable of doing, and what kinds of

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140. *See generally* Jessica J. Good et al., *The Effects of Gender Stereotypic and Counter-Stereotypic Textbook Images on Science Performance*, 150 J. Soc. Psych. 132 (2010).

141. *Id.* at 132–33.

142. *See generally* Nilanjana Dasgupta & Anthony Greenwald, *On the Malleability of Automatic Attitudes: Combating Automatic Prejudice With Images of Admired and Disliked Individuals*, 81 J. Personality and Soc. Psych. 800 (2001) (hereinafter "Dasgupta and Greenwald"). *See also* Finnegan et. al., *supra* note 132 (exposure to counter-stereotypical pictures is a valuable strategy for overcoming spontaneous gender stereotype biases); 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. Psych. 642 (2004) (explaining how local environments shape women's unconscious beliefs about their ingroup); Miglena Sternadori, *Empathy May Curb Bias: Two Studies of the Effects of News Stories on Implicit Attitudes Toward African Americans and Native Americans*, 9 Contemp. Readings L. & Soc. Just. 11 (2017).

143. *See* Dasgupta and Greenwald, *supra* note 142, at 802, 807.

144. *Id.*

145. *Id.* at 808.

146. *See* Blair, *supra* note 127, at 245–46, 249.

hobbies and activities she enjoys.[147] Significantly, the stereotype-reduction effect was not found in participants who were simply asked to suppress any gender stereotypes they might have and "avoid making associations between females and weakness."[148]

Second, Gawronski et al. (2008) provided two types of training to study participants.[149] The first group was trained to negate stereotype-congruent information; the second group was trained to affirm stereotype-*in*congruent information. The results showed that training in the affirmation of counterstereotypes led to a reduction in the activation of stereotypes and negative evaluations.[150] In contrast, "extended training in the negation of stereotypes enhanced rather than reduced the activation of stereotypes and negative evaluations."[151]

Third, Bodenhausen et al. (1994) reported discouraging findings about a "rebound" effect—the resilience of stereotypic attitudes after a period of training to counteract them.[152] A similar caution was reported by Finnegan et al. (2015), in a study designed to counteract stereotypes: "[T]he processing of stereotype incongruent pairings rarely achieved the same level of effortlessly fast and accurate responding as that of stereotype congruent and neutral pairings. . . . Thus, it appears that gender biases associated with social and occupational role nouns are deeply ingrained and difficult to overcome."[153]

G. *Mindfulness*

A seventh method for reducing unconscious bias is mindfulness. A study by Lueke and Gibson (2014) examined whether practicing mindfulness meditation can decrease unconscious outgroup bias.[154]

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147. Irene V. Blair et al., *Imagining Stereotypes Away: The Moderation of Implicit Stereotypes Through Mental Imagery*, 81 J. Personality & Soc. Psych. 828, 830 (2001).

148. *Id.* at 834.

149. *See generally* Bertram Gawronski et al., *When "Just Say No" is Not Enough: Affirmation Versus Negation Training and the Reduction of Automatic Stereotype Activation*, 44 J. Experimental Soc. Psych. 370 (2008).

150. *See id.* at 375.

151. *Id.* at 370.

152. *See generally* Macrae Bodenhausen et al., *Out of Mind but Back in Sight: Stereotypes on the Rebound*, 67 J. Personality & Soc. Psych. 808 (1994).

153. *See* Finnegan et al., *supra* note 132, at 13.

154. *See generally* Adam Lueke & Bryan Gibson, *Mindfulness Meditation Reduces Implicit Age and Race Bias: The Role of Reduced Automaticity of Responding*, 6 Soc. Psych. & Personality Sci. 284 (2014).

Mindfulness meditation is a technique in which the meditating person concentrates on the present and refrains from judging their emotions and thoughts, instead viewing them objectively as mental events—almost as if one were observing the weather.[155] This practice "inhibits the natural tendency toward reaction and automatic evaluation."[156] The researchers measured the participants' baseline bias using the IAT for race and age. Then one group of participants listened to a 10-minute meditation "that focused the individual and made them more aware of their sensations and thoughts in a nonjudgmental way," while a second group listened to a neutral audiotape about historic events.[157] Both groups then took the race and age IATs for a second time. The results showed a decrease in implicit race and age bias in the first group but not in the second.[158]

In two other studies, researchers showed that mindfulness training reduced prejudiced behavior toward the elderly[159] and the handicapped.[160] And in a fourth study, a different type of meditation—loving-kindness meditation—was shown to reduce bias against homeless people and Black people.[161] This study also suggests that although mindfulness meditation may increase cognitive control (a useful ability for overriding the visceral reactions that can be caused

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155. Mindfulness exercises, Mayo Clinic, https://www.mayoclinic.org/healthy-lifestyle/consumer-health/in-depth/mindfulness-exercises/art-20046356, *archived at* https://perma.cc/4AQ7-KDH9. ("Mindfulness is a type of meditation in which you focus on being intensely aware of what you're sensing and feeling in the moment, without interpretation or judgment.").

156. Lueke & Gibson, *supra* note 154, at 284.

157. *Id.* at 288.

158. *See id*. at 288–89.

159. *See generally* Maja Djikic et al., *Reducing Stereotyping Through Mindfulness: Effects on Automatic Stereotype-Activated Behaviors*, 15 J. Adult Dev. 106 (2008).

160. *See generally* Ellen J. Langer et al., *Decreasing Prejudice by Increasing Discrimination*, 49 J. Personality & Soc. Psych. 113 (1985).

161. *See* Yoona Kang et al., *The Nondiscriminating Heart: Lovingkindness Meditation Training Decreases Implicit Intergroup Bias*, 143 J. Experimental Psych.: Gen. 1306, 1306 (2014) ("Lovingkindness meditation is intended to cultivate warm and friendly feelings toward the self and others.").

by implicit bias),[162] "loving-kindness meditation may cultivate feelings of connectedness by creating new positive associations."[163]

H. *Combining Strategies*

In our view, one of the most important frontiers of bias-reduction research and intervention is measuring the impact of multiple concurrent techniques and determining how frequently these combinations of techniques should be repeated.

Devine et al. (2013) developed a habit-breaking intervention in which participants were asked to apply race-bias reduction strategies during 12 consecutive weeks.[164] The authors wanted to investigate whether it was possible to engage in a voluntary, multifaceted, and self-regulatory process aimed to minimize implicit bias over a longer period.[165] Participants who reported using the strategies demonstrated a greater awareness and concern about discrimination as well as a substantial decrease in unconscious bias.[166] The intervention concentrated on five techniques that the participants were asked to apply autonomously for 12 weeks: (1) stereotype replacement, (2) counter-stereotypic imaging, (3) individuation, (4) perspective taking, and (5) increasing opportunities for contact, such as looking for opportunities to engage in positive encounters with members of a stereotyped group.[167] Notably, the participants were free to choose for themselves which of those techniques they wanted to apply in their daily lives. However, the program stressed that the techniques are mutually reinforcing. "For example, contact with counter-stereotypic

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162. Based on research showing mindfulness to be an effective debiasing strategy, Dr. Pat Croskerry has called for more mindfulness training in the medical field, where the diagnostic failure rate by doctors is estimated to be 10 to 15% with the principal reason being cognitive biases. Therefore, she urges that all clinicians should learn and practice mindfulness and self-reflection strategies: "All clinicians should develop the habit of conducting regular and frequent surveillance of their intuitive behavior." Pat Croskerry, *From Mindless to Mindful Practice — Cognitive Bias and Clinical Decision Making*, 368 NEW ENG. J. MED. 2445, 2448 (2013). See also discussion in Part II(B) regarding fMRI-measured responses to other-race photos in the amygdala and prefrontal cortex.

163. Kang et al., *supra* note 161, at 1311.

164. *See* Patricia G. Devine et al., *Long-Term Reduction in Implicit Race Bias: A Prejudice Habit-Breaking Intervention*, 48 J. EXP. SOC. PSYCH. 1267, 1267 (2012).

165. *See id.*

166. *See id.* at 1276.

167. *Id.* at 1270–71. The study did not record the individuals' choice of strategies. Therefore, one limitation of this study was not knowing which of the five techniques correlated with the greatest impact on bias reduction.

others provides grist for counter-stereotypic imaging as well as providing opportunities for individuation, perspective taking and stereotype replacement. Similarly, perspective taking can enhance stereotype replacement and individuation by encouraging people to see the world from the eyes of a stigmatized other."[168]

The authors reported that "participants with more concern about discrimination at week 2 had particularly low levels of implicit bias at weeks 4 and 8. This effect remained from week 4 to week 8 . . . indicating that people high in concern about discrimination at week 2 retained the reductions in IAT[-measured] bias 8 weeks after the intervention."[169]

Burgess et al. (2007) proposed an intervention designed for medical professionals based on their review of numerous bias-reduction studies.[170] They urged healthcare providers to combine several strategies focused on reducing racial bias: "(1) enhance internal motivation to reduce bias, while avoiding external pressure; (2) increase understanding about the psychological basis of bias; (3) enhance providers' confidence in their ability to successfully interact with socially dissimilar patients; (4) enhance emotional regulation skills; and (5) improve the ability to build partnerships with patients."[171]

Carnes et al. (2015) conducted a study (discussed in Part III(A)) in which faculty from 46 academic departments at the University of Wisconsin were provided with training encouraging the combined use of several strategies to counteract gender bias.[172] The researchers found that unconscious gender bias was reduced when participants were asked to use techniques like replacing a gender stereotype with accurate information, positive counter-stereotype imaging, imagining in detail what it is like to be a person in a stereotyped group, and meeting with "counter-stereotypic exemplars, such as senior women faculty."[173]

Finally, a 2016 meta-analysis of 260 studies of diversity training programs found that "the positive effects of diversity training were

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168. *Id.* at 1270.

169. *Id.* at 1273.

170. *See generally* Diana J. Burgess et al., *Reducing Racial Bias Among Health Care Providers: Lessons from Social-Cognitive Psychology*, 22 J. GEN. INTERNAL MED. 882 (2007).

171. *Id.* at 882.

172. *See generally* Carnes et al., *supra* note 47.

173. *Id.* at 223.

greater when training was complemented by other diversity initiatives, targeted to both awareness and skills development, and conducted over a significant period of time."[174]

I. *Assessment*

If there were a single "magic bullet" to neutralize unconscious bias, an article of this kind would be unnecessary, and the problem of unconscious bias would be solved by now. In our view, the bias-reduction techniques described in this section of the article are moving in a promising direction to the extent that they examine the potential effects of long-term interventions that utilize a variety of techniques in combination.

However, most of the meta-analyses of bias-reduction strategies have looked at *individual* interventions and have found unimpressive impacts.

In 2009, Paluck and Green published the results of their review of 985 studies of bias reduction strategies.[175] They concluded that "psychologists are a long way from demonstrating the most effective ways to reduce prejudice," and even those interventions that reduce prejudice in isolated laboratory settings have not been proven to work in the field.[176]

In 2014, Lai et al. analyzed 17 laboratory interventions aimed at reducing implicit racial bias and found that eight of them were effective.[177] The most effective interventions involved stereotype replacement/negation (discussed in Part III(F)). None of the examined interventions reduced explicit racial bias, and, interestingly, "intervention effectiveness extended only weakly to . . . Asians and Hispanics."[178]

In a follow-up study published in 2016 involving 6,321 total participants, Lai et al. compared the effectiveness of nine interventions to reduce implicit racial preferences over time to observe how long the change lasts.[179] All chosen interventions instantly reduced implicit bias and were effective at prompting short-term malleability in implicit biases; however, none were effective after a delay of several

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174. Katerina Bezrukova et al., *A Meta-Analytical Integration of Over 40 Years of Research on Diversity Training Evaluation*, 142 Psych. Bull. 1227, 1227 (2016).
175. *See generally* Paluck & Green, *supra* note 18.
176. *Id.* at 360.
177. *See* Calvin K. Lai et al., *Reducing Implicit Racial Preferences: I. A Comparative Investigation of 17 Interventions*, 143 J. Exp. Psych.: Gen. 1765, 1766 (2014).
178. *Id.*
179. *See generally* Calvin K. Lai et al., *Reducing Implicit Racial Preferences: II. Intervention Effectiveness Across Time*, 145 J. Exp. Psych.: Gen. 1001 (2016).

hours to several days.[180] As in the other meta-analyses, the researchers found little evidence for long-term implicit preference change, even just a few days after the intervention. The authors concluded that it is "possible that brief interventions can be effective, but only when administered repeatedly over time in a spaced learning schedule."[181]

FitzGerald et al. (2019) conducted a systematic review of 47 bias-reduction experiments conducted on adults from May 2005 through April 2015.[182] The interventions were grouped in categories similar to those in Part III of this article. Several types of interventions showed a high level of effectiveness: counteracting stereotypes, promoting identification with an outgroup, and forming an intention to be unbiased.[183] However, some of the interventions produced inconsistent results; for example, appealing to egalitarian values was effective in only four out of eight experiments, and perspective-taking was effective in only four out of eleven experiments.[184] The authors suggested that further research is needed in order to determine what factors had caused each of the interventions to be effective in some settings but not in others.[185]

The FitzGerald review also showed that even when one-shot bias-reduction interventions are immediately effective, those effects often do not last. The authors note:

> To some extent, the ineffectiveness of interventions after a longer time period is to be expected. Implicit biases have been partly formed through repeated exposure to associations: their very presence hints at their being not only generated but also maintained by culture. Any counter-actions, even if effective immediately, would then themselves be rapidly countered since participants remain part of their culture from which they receive constant inputs. To tackle this, *interventions may need to be repeated frequently* or somehow be constructed so that they create durable changes in the habits of participants. More in-depth interventions where participants follow a whole course or interact frequently with the outgroup have been successful.[186]

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180. *See id.* at 1001.
181. *Id.* at 1013.
182. *See generally* Chloë FitzGerald et al., *Interventions Designed to Reduce Implicit Prejudices and Implicit Stereotypes in Real World Contexts: A Systematic Review*, 7 BMC Psych. 1 (2019).
183. *See id.* at 7.
184. *Id.*
185. *See id.* at 10.
186. *Id.* at 9 (emphasis added) (citing Lai et al., *supra* note 179; Rudman et al., *supra* note 45; Shook & Fazio, *infra* note 193).

Finally, in 2019, Forscher et al. synthesized evidence from 492 studies, involving 87,418 participants, to assess the effectiveness of various interventions designed to reduce implicit bias.[187] They found that implicit measures can be changed, but that long-term effects are often weak or non-existent, that there was little change in explicit bias,[188] and that interventions "generally produced trivial changes in behavior."[189] Significantly, they found that procedures that combined sets of strategies and invoked goals or motivations produced the largest positive changes in implicit bias.[190]

One way of looking at the assessments described above is profoundly discouraging: these reviews and meta-analyses confirm what common sense tells us—unconscious bias resists change. Another way of looking at them is that we are merely at the beginning of an era in which bias-reduction research, and the tools for measuring unconscious bias, are being refined. In particular, we are just beginning to see combinations of interventions, utilized over an extended period of time (as in the Devine study described in Part III(H)), evaluated in the laboratory. And the next frontier—measuring the impact of long-term, multi-faceted interventions in the field—has barely begun.

IV. PRACTICAL APPLICATIONS

While acknowledging the nascent state of scientific knowledge about the effectiveness of bias-reduction strategies, we believe that much can be done with the knowledge we already have.

There are already notable real-life examples of implicit bias reduction. For instance, in an experiment in India, some positions in several village councils were randomly selected to be held by women.[191] Researchers found that men in villages that had female council leaders held weaker implicit gender biases than men living in villages where a gender quota was deployed.[192] In an experiment involving college roommates, researchers found that, having an outgroup roommate decreased implicit prejudice after only one quarter of a school year.[193] Another college-based study demonstrated that

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187. *See* Patrick S. Forscher et al., *A Meta-Analysis of Procedures to Change Implicit Measures*, 117 J. PERSONALITY & SOC. PSYCH. 522, 522 (2019).

188. *See id.* at 541–42.

189. *Id.* at 522.

190. *See id.*

191. *See generally* Lori Beaman at al., *Powerful Women: Does Exposure Reduce Bias?*, 124 Q.J. ECON. 1497 (2009).

192. *Id.* at 1497–501.

193. *See* Natalie J. Shook & Russell H. Fazio, *Interracial Roommate Relationships: An Experimental Field Test of the Contact Hypothesis*, 19 PSYCH. SCI. 717, 717 (2008).

undergraduate women who had more contact with female instructors showed less implicit gender bias than women who had more contact with male instructors during their first year.[194]

As noted in Part III, our review of bias-reduction research showed that many of the studies—especially those conducted in the United States—focus on race and gender biases, but we saw no evidence that these techniques would not be effective in addressing other types of biases.[195]

The following sections describe two types of strategies (individual and institutional) for reducing implicit bias and techniques for counteracting the effects of implicit bias.

A. *Individual Action*

With regard to actions that individuals can undertake on their own—outside of any workplace or other institution—the research described in Part III of this article suggests that several related strategies can be effective—though for continued success, individuals must maintain their use over time:

- Increasing awareness of bias and the impacts of bias
- Increasing motivation to counteract bias
- Individuation
- Perspective-taking / empathy
- Contact
- Stereotype negation / replacement
- Mindfulness

Each of these strategies plays a role in the proposed initiatives described below.

1. *Individual Study and Broadening of Awareness*

Each of us is, to some degree, the curator of our own exposure to the world—both through direct experience (such as travel) or vicarious experience (such as literature, films, music, theater, social media, news, etc.). Recent decades have seen an explosion of books, articles, and videos that explain how bias works, where it comes from, and its

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194. *See* Nilanjana Dasgupta & Shaki Asgari, *Seeing is Believing: Exposure to Counterstereotypic Women Leaders and its Effects on the Malleability of Automatic Gender Stereotyping*, 40 J. EXPERIMENTAL SOC. PSYCH. 642, 654 (2004).

195. *See, e.g.*, Maria Nivalda de Carvalho-Freitas & Sofia Stathi, *Reducing Workplace Bias Toward People with Disabilities with the Use of Imagined Contact*, 47 J. APPLIED SOC. PSYCH. 256, 256 (2017) (reporting increased workplace support for the rights of people with disabilities after an imagined-contact intervention).

insidious impact.[196] Resource lists on implicit bias abound on the In-
ternet. In our view, learning more about bias, and especially its ef-
fects, is likely to increase our motivation to counteract it, because
those effects are pernicious and contrary to the moral foundations of
a society that espouses equal treatment.

One of the considerations in curating our experience of the world
is whether we create opportunities to learn about people three-di-
mensionally—as individuals.[197] Chimamanda Ngozi Adichie ad-
dresses this consideration in her brilliant TED talk, "The Danger of
the Single Story."[198] There, she describes the experience of seeing
the household employees at her parents' home in Nsukka, a univer-
sity town where she was raised in Nigeria, as simply "poor" rather
than having a variety of other characteristics. After visiting the em-
ployees in a village outside of Nsukka and seeing the artistic items
they created there, her view of them broadened.

It is beyond the scope of this article to list all of the available
resources of this kind, but several are worth mentioning as examples.
The Spirit Catches You and You Fall Down by Anne Fadiman tells
the story of Hmong immigrants living in California who struggle to
understand the medical and child-welfare norms for treatment of
their epileptic daughter whom they view as possessing a spiritual
gift.[199] Or for three-dimensional insight into Black experience in the
United States, see *Between the World and Me*, by Ta-Nehisi
Coates;[200] for the experience of a gay Asian-American, *Covering*, by

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196. *See generally* Bias (Finish Line Features 2016) (award-winning documentary
by Robin Hauser) (information available at https://www.finishlinefeaturefilms.com/
bias, *archived at* https://perma.cc/4G8G-6LA8; Pragya Agarwal, Sway: Unravelling
Unconscious Bias (2020); Jennifer Eberhardt, Biased: Uncovering the Hidden
Prejudice that Shapes What We See, Think and Do (2019); Banaji & Greenwald,
supra note 23; Wilkerson, *supra* note 36.

197. *See* Section III(C) (discussing individuation as a bias-reduction strategy).

198. Chimamanda Ngozi Adichie, The Danger of the Single Story, Ted (2009),
https://www.ted.com/talks/chimamanda_ngozi_adichie_the_danger_of_a_single_
story?language=EN, *archived at* https://perma.cc/F8PN-M5KB.

199. *See generally* Anne Fadiman, The Spirit Catches You and You Fall Down:
A Hmong Child, Her American Doctors, and the Collision of Two Cultures
(1997). Fadiman's book is on the required-reading list for many medical schools, so-
cial work programs, and other professional schools.

200. *See generally* Ta-Nehisi Coates, Between the World and Me (2015).

Kenji Yoshino.[201] Or for a television program comedically illustrating the everyday life of Muslim Americans, see "Ramy," created by Ramy Youssef.[202]

The point is that immersing ourselves in literature and media of this kind not only contributes to our seeing people who are unlike us three-dimensionally—as individuals, rather than as stereotypes—but that it also enables us to experience points of commonality, thus breaking down the barriers of "otherness" that might otherwise remain in place. For example, in "Ramy," viewers will see that whether you are Muslim or not, children are easily embarrassed by their parents' peculiarities.[203] Seeing each other more three-dimensionally can also assist in the breaking down of stereotypes. And engaging in this type of immersion improves our perspective-taking ability.

2.   *Expansion of Social Contacts*

The resources described above provide *indirect* exposure to the life and experiences of people who are members of historically marginalized groups. The research described in the previous section of this article suggests that direct contact with members of such groups can also be a powerful antidote to bias. However, it is important to bear in mind that the beneficial effects of such contacts can be dependent upon a number of factors, such as whether the contact involves people of equal 'status,' and whose connection involves the pursuit of common goals and intergroup cooperation.[204]

Just as we can be curators of our indirect experience of the world (such as through literature and other media), we can also be curators of our direct experience and seek out opportunities to engage with people from groups that are subjected to bias.

Such opportunities may arise in our professional lives and in our social lives. In many professions, it is common to form discussion, support, or peer-supervision groups. This is especially true for psychotherapists, but the formation of such groups could benefit people

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201.   *See generally* KENJI YOSHINO, COVERING: THE HIDDEN ASSAULT ON OUR CIVIL RIGHTS (2007).

202.   *Ramy* (Hulu 2019), https://www.hulu.com/series/ramy-4bcb6c3a-3d9a-4d49-b8e0-57fb7de9c8d6.

203.   *See also* Carl Pickhardt, *When Parents Embarrass Their Adolescent*, PSYCH. TODAY (November 19, 2012), https://www.psychologytoday.com/us/blog/surviving-your-childs-adolescence/201211/when-parents-embarrass-their-adolescent, *archived at* https://perma.cc/KSG7-5VPD.

204.   *See* discussion in Section III(E)(1).

in many professions and occupations, and creates an opportunity for outreach, connection, diversity, and inclusion.[205]

Wholly apart from our professional lives, individuals sometimes form book groups, film groups, parent support groups, or activity-related affinity groups (such as a hiking or cycling club, a yoga class, or a meditation group). Each of these types of social activities creates an opportunity for inclusion and greater contact with people with identities different from our own. Obviously, in seeking such diversity and inclusion, it is necessary to avoid objectifying people and treating their involvement as solely for the purpose of broadening the perspectives of those who are doing the inviting.

Indeed, the research cited in Part III(E) suggests that creating diverse groups of the kind described above need not be explicitly motivated by the goal of bias reduction in order to advance those goals. Like the indirect methods of contact described above, direct contact is likely to have de-biasing effects because it increases our perspective-taking, individuation of others, and stereotype reduction—especially if we make a point of getting to know each other more three-dimensionally in the context of the group activity.[206]

3.   *Experiential Learning*

Individuals can seek out opportunities for experiential learning about bias-reduction, including opportunities for sharing narratives of participants' experiences. In support of this recommendation, we offer two types of experience that the authors have had as teachers and trainers.

> Helen Winter: I can attest to this from my own experience and observations as a mediator. Offering a safe space for participants, such as refugees and locals, to address stereotypes and difficult topics with "the other side" without being afraid of losing face or asking something inappropriate to members of the

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205.   A personal observation from David Hoffman: For more than twenty years I have been part of a small, multiracial group of mediators, who share both personal and professional experiences; the diversity of this group, which was an intentional element, has profoundly enriched my life and broadened my perspectives about race, class, religion, sexuality, and gender identity.

206.   *See generally* TODD L. PITTINSKY, US PLUS THEM: TAPPING THE POSITIVE POWER OF DIFFERENCE (2012).

outgroup, leads to a greater awareness of prejudice and self-reported decrease in bias.[207] "Becoming sensitized to those stereotypes, as well as more conscious as a group that everyone has biases, is a first crucial step to their reduction."[208] However, these findings largely relied on self-reporting. A story-sharing forum with the purpose of addressing prejudice directly with members of the outgroup should further explore other measuring mechanisms such as IAT scores.

David Hoffman: My experience in teaching about implicit bias and bias-reduction strategies to law students persuades me that the most powerful intervention often involves simply going around the circle of the classroom, with each student taking a turn sharing about an experience, a mentor, or something the student is passionate about. The exercise gives each member of the class an opportunity to be vulnerable (as they tell their story) and supportive (as a listener)—with the overall result of increasing individuation, perspective-taking, and undermining stereotypes. The experience of being heard can be deepened by having another student in the circle ask the speaker a question before the baton is passed to the next speaker. In addition, roleplaying creates opportunities to "road test" the skills and knowledge associated with unbiased engagement with others.[209]

4.   *Mindfulness*

The research about mindfulness described in the previous section of this article does not establish the precise mechanism by which meditation has a de-biasing effect. However, the de-biasing effects of a meditation practice or other mindfulness practice may arise from an enhanced ability to manage the torrent of fleeting thoughts that pass through our minds during our waking hours. Some of those thoughts may be images, memories, attitudes, or fears based on biases contrary to the egalitarian values that we espouse. Thus, one of the values of mindfulness is that it slows down our reactions and gives our conscious anti-bias intentions an opportunity to activate,

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207.   *See* Helen M. E. Winter et al., *Psychosocial Peer Mediation as Sustainable Method for Conflict Prevention and Management Among Refugee Communities in Germany*, 39 Conflict Resol. Q. 195, 202–04 (2021).

208.   *Id.* at 203.

209.   The teaching techniques used in this Diversity and Dispute Resolution course at Harvard Law School are described more fully here: David A. Hoffman, *Teaching Diversity at Harvard Law School Or: The Education of a Straight, White, Cisgender, Male, Able-Bodied, Upper-Middle-Class Lecturer on Law*, 27 Disp. Resol. Mag. 24, 25–28 (2021).

which in turn can support stereotype negation, awareness of bias, individuation, and perspective-taking.[210]

5. *Psychological/Introspection Strategies*

All of the techniques for reducing bias described in this article are psychological strategies in the sense that they are trying to change, albeit indirectly, how our minds process difference. However, there's another avenue available: direct examination of our bigoted thoughts and feelings through introspection.

Social psychologists have debated the limits of introspection as a tool for uncovering unconscious bias and counteracting it.[211] It appears, however, that there are some practical introspection tools—in addition to those described in Parts III(A) and III(B)—that are worth considering as methods of surfacing some forms of bias and reducing them, including a relatively new psychotherapy model, the Internal Family Systems ("IFS") model,[212] discussed below.

In a recent talk, law professor and conflict resolution trainer Nina Meierding described a method that she uses to change negative attitudes she grew up with about people whose body weight is significantly above average.[213] Through self-examination and reflection, she discovered that she acquired this implicit bias in reaction to numerous deaths in her family from various illnesses, and her focus on "healthy living."[214] She found that she could counteract assumptions about weight gain by creating a mnemonic device—in her case, the word "IMAGE"—to remind her of some of the factors that can contribute to people weighing more than average: *I*llness (e.g., hypothyroidism), *M*edication (e.g., insulin), *A*ccess to healthy foods (i.e., lack of such access), *G*enetics, and *E*nvironment (social or physical).[215] A

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210. *See* Jon Kabat-Zinn, Wherever You Go, There You Are: Mindfulness Meditation in Everyday Life (10th Anniversary ed. 2005), for an excellent discussion about incorporating mindfulness meditation into everyday life.

211. *See, e.g.*, Bertram Gawronski et al., *What Do Implicit Measures Tell Us? Scrutinizing the Validity of Three Common Assumptions*, 2 Perspectives on Psych. Sci. 181, 182–84 (2007); Hart Blanton & James Jaccard, *Unconscious Racism: A Concept in Pursuit of a Measure*, 34 Ann. Rev. Socio. 277, 281–84 (2008).

212. *See generally*, Richard Schwartz, *Working with Internalized Racism: From Shame to Unburdening with IFS*, Psychotherapy Networker (Sept./Oct. 2020), https://www.psychotherapynetworker.org/magazine/article/2490/working-with-internalized-racism/cf2487e2-1fc0-4238-b567-7b8d48032005/oim, *archived at* https://perma.cc/6U3Y-YAXD.

213. Nina Meierding, Working with Different Perspectives of Reality: How Implicit Bias and Cognitive Barriers Create Obstacles to Settlement, Lecture at the Ann. Conf. of the Nat'l Ctr for Alt. Disp. Resol. (June 23, 2022).

214. *Id.*

215. *Id.*

similar technique that some people use to manage a bias against people of above-average weight, but focusing on emotion as opposed to cognition, is fostering empathy through perspective-taking.[216]

These techniques are similar to strategies developed by clinicians who use the IFS model,[217] which, in our view, provides one of the more promising strategies for changing biased attitudes and counteracting negative stereotypes.

The foundation of the IFS model,[218] which was developed by Dr. Richard Schwartz, is that our minds have "parts"[219]—subpersonalities that perform different functions in our mind's internal operating system. Some of the parts are described in the IFS model as "exiles": they hold feelings of inadequacy, shame, fear, or pain.[220] (For example, one might have a part that fears rejection by others.) These parts are "exiled" in the sense that we try to avoid experiencing them and may try to suppress them.[221] Other parts are called "managers": they try to make sense of the world, keep us on track with our day-to-day responsibilities, and work proactively to keep the exiles from being triggered.[222] (For example, one might have a part that works hard to be on time for meetings to avoid criticism or rejection for keeping another person waiting.) And some parts are called "firefighters": they respond, often in extreme and counterproductive ways, to injuries inflicted on exiles (such as criticism or shaming) by

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216. *See, e.g.,* ROXANE GAY, HUNGER: A MEMOIR OF (MY) BODY (2017) (providing an account of how gaining weight was a coping strategy in response to trauma). Thanks to Leslie Warner for this insight.

217. Although the word "Family" is part of the term "Internal Family Systems," the model in not about families per se, but instead about the "family-like" relationships of the parts in each individual. *See* David A. Hoffman, *Mediation, Multiple Minds, and the Negotiation Within,* 16 HARV. NEGOT. L. REV. 297, 312 (2011). For example, an angry part may become active as a means of fending off blame coming from another person; the angry part causes us to make a counteraccusation to protect a vulnerable part that feels shame arising from the original accusation. This is similar to roles that actual family members might play if one family member feels that another family member is being wrongly accused.

218. For a general introduction to the IFS model, *see* RICHARD C. SCHWARTZ, INTRODUCTION TO THE INTERNAL FAMILY SYSTEMS MODEL (2001); RICHARD C. SCHWARTZ & MARTHA SWEEZY, INTERNAL FAMILY SYSTEMS THERAPY (2nd ed. 2020).

219. The concept of "parts" does not mean physical structures in the brain, but rather neural networks. In that sense, referring to parts as having personalities, agendas, and burdens is more of a metaphor that makes the behavior of these neural networks comprehensible.

220. *See* RICHARD C. SCHWARTZ & MARTHA SWEEZY, INTERNAL FAMILY SYSTEMS THERAPY 59-61 (2nd ed. 2020).

221. *See id.*

222. *See id.* at 33.

dousing the flames of raw emotion through, e.g., drinking, overeating, overspending, or with an extreme display of anger.[223] (For example, facing painful criticism for keeping someone waiting, a firefighter part might overreact with an angry outburst about all the times when the other person acted inconsiderately.)

In addition to all of our many "parts," the IFS model includes a concept of our core identity: "Self" energy (which in some wisdom traditions is called "spirit" or "soul").[224] Self-energy—which embodies curiosity, compassion, calm, connectedness, and no agenda other than healing—is our seat of consciousness, and it can coordinate our various parts when we are able to access it. The goal of the IFS model is to be Self-led.

The relevance of the IFS model to implicit bias[225] is that our managers are accustomed to creating mental shortcuts to make sense of the world, often by soaking up at an early age messages from around us (e.g., "People [of x background] typically have low income, and therefore there must be something wrong with them.").[226] Other managerial parts adopt biases to soothe exiles that may feel inadequate in some way (e.g., "I may not be exceptionally smart, but at least I am not [fill in the blank].").[227] And other managerial parts may develop avoidant strategies based on fear of embarrassment.[228]

The IFS model offers a technique for counteracting such messages, which builds on awareness strategies discussed in Part III(A). The IFS model involves accessing Self-energy to engage with

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223. *See id.* at 35.

224. *See* Richard C. Schwartz, *Moving from Acceptance Toward Transformation with Internal Family Systems Therapy*, 69 J. CLINICAL PSYCH.: IN SESSION 805, 807 (2013).

225. For a broader discussion of the value of the IFS model in counteracting bias, see Richard C. Schwartz, *Dealing with Racism: Should We Exorcise or Embrace Our Inner Bigots?, in* INNOVATIONS AND ELABORATIONS IN INTERNAL FAMILY SYSTEMS THERAPY (Martha Sweezy & Ellen L. Ziskind eds., 2016); Richard C. Schwartz, *Working with Internalized Racism: From Shame to Unburdening with IFS*, PSYCHOTHERAPY NETWORKER (September/October 2020), https://www.psychotherapynetworker.org/magazine/article/2490/working-with-internalized-racism/cf2487e2-1fc0-4238-b567-7b8d48032005/oim, *archived at* https://perma.cc/6QXY-8LVS.

226. *See* Richard C. Schwartz, *Dealing with Racism: Should We Exorcise or Embrace Our Inner Bigots? in* INNOVATIONS AND ELABORATIONS IN INTERNAL FAMILY SYSTEMS THERAPY 126 (Martha Sweezy & Ellen L. Ziskind eds., 2016) (hereinafter Schwartz, *Dealing with Racism*).

227. *See id.* at 127.

228. *See id.* at 128 ("This inner pessimist tells me nothing can help less advantaged people or solve their problems, so I'll fail if I try."); *see also* Richard C. Schwartz, *Working with Internalized Racism: From Shame to Unburdening with IFS*, PSYCHOTHERAPY NETWORKER at 9 (Sept./Oct. 2020) (noting fear of "humiliation that makes us reluctant to speak out or get close to people of color").

the parts that hold onto bigoted messages, bringing both curiosity and compassion to that engagement. For example, we might ask a part that holds racially biased attitudes or beliefs, "where did you acquire those bigoted messages about people of a different race?" Often, the answer is that these messages were acquired at an early age—before our conscious minds began critically assessing information and perspectives about people of other races.

It may seem counterintuitive to suggest, as the IFS model does, that compassion for our bigoted parts will help us be less biased. But trying to *suppress* bigoted parts by shaming them, or denying their existence, does not prevent them from showing up in our psyches and behaviors. Instead, updating them with new information and perspectives—in a manner similar to Meierding's—has the potential to replace the bigoted messages that these parts carry with messages that embody a more informed awareness of the world.[229] To be successful, we need to heal those protective parts "with compassion rather than contempt."[230]

In an article about his own journey with regard to racism, Dr. Schwartz describes the inner coalition of racist parts that he encountered:

> I'll start with the angry scapegoating part [of me that had] the need to dominate or put others down . . . It was protecting parts who felt worthless or powerless in the past by making me feel powerful and better than others. . . .
>
> Another part . . . uses an entitled voice and hates weakness in my clients, my family members, and me. . . He is jaded and cynical and rationalizes inaction . . . with explanations for the plight of those who are less privileged. . . .
>
> [My] inner pessimist tells me nothing can help less advantaged people [including people of color] or solve their problems . . . He says I don't have what it takes to help change anything and I'll only display my ignorance if I get involved. . . .

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229. For example, one might educate the parts holding bigoted messages about the headwinds faced by racial minorities in housing, education, employment, and healthcare, among others.

230. Richard C. Schwartz, *Working with Internalized Racism*: From Shame to Unburdening with IFS, Psychotherapy Networker (Sept./Oct. 2020), https://www.psychotherapynetworker.org/magazine/article/2490/working-with-internalized-racism/cf2487e2-1fc0-4238-b567-7b8d48032005/oim, *archived at* https://perma.cc/6QXY-8LVS (hereinafter Schwartz, *Working with Internalized Racism*),

> Denial, the fourth part of this inner racist coalition, is afraid to let me see how I profit at the expense of others for fear that my innate compassion will make me do things to lose my advantages, or will trigger my inner judge, which will make me feel bad about myself.[231]

Schwartz points out that he also has an inner *antiracist* coalition, which is polarized with (i.e., exists in tension with) the racist coalition. That coalition consists of the aforementioned "inner judge," which "criticizes me for being racist, sexist, homophobic, or a bad person for some other reason." Another part "hates injustice . . . it remembers well the times when I was the victim of bigotry, growing up [as] a Jew in a Christian environment." A third part is a "rebel," which enjoys battling "established cultural discourses" and "being an outsider."[232]

According to the IFS model, once these inner protective parts are identified, it becomes possible to do the additional work of figuring out what vulnerable, exiled parts are being guarded by the protectors. In other words, "before we can expect [protective parts] to totally disarm, we must heal the wounds they protect."[233] In his own internal system, Schwartz identified a fear of judgment: "parts who are sure that I'll be abandoned if someone is upset with me."[234] In addition, there are "locked-in memories of pain, . . . feelings of worthlessness that make us believe we need to protect our privilege to survive, . . . feelings of powerlessness that make us want to dominate, . . . feelings of humiliation that make us reluctant to speak out or get close to people of color, [and] . . . feelings of shame that make us apathetic."[235]

Schwartz also points out that this inner work is not inconsistent with societal work: "[I]t's not enough for us to do this work individually. Racism-based bias and injustice is systemic in our institutions. If we don't act to counter it, we're complicit in it."[236]

While the evidence for its value is, at this point, anecdotal,[237] we believe the IFS model is an especially promising intervention for bias

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231.   Schwartz, *Dealing with Racism*, *supra* note 226, at 124, 127.

232.   *Id.* at 128.

233.   Schwartz, *Working with Internalized Racism*, *supra* note 230.

234.   Schwartz, *Dealing with Racism*, *supra* note 226, at 124, 129.

235.   Schwartz, *Working with Internalized Racism*, *supra* note 230.

236.   *Id.*

237.   *See, e.g.*, Schwartz, *Dealing with Racism*, *supra* note 226, at 130 ("My antiracism work in therapy has been transformative."); The One Inside: An Internal Family Systems Podcast, *IFS and The Power of Healing Our Own Racism with Dorothea Hrossowyc and Ingrid Helander* (Dec. 11, 2020) (providing "personal stories and their experiences working with their racist parts"), https://theoneinside.libsyn.com/ifs-and-

reduction, based on the reports of psychotherapists who are using it in that way. It seems reasonable to believe that a technique that enables individuals to examine, with compassion, the origins of their biases could hold as much, if not more, promise as techniques that involve simply becoming aware of our unconscious bias and trying to instill a motivation to be unbiased.

6. *Stereotype Negation/Replacement*

Prof. Mahzarin Banaji, co-creator of the Implicit Association Test, developed a simple intervention for exposure to counter-stereotypic negation / replacement on her office computer:

> [S]he created a screensaver for her computer that displays images of a diverse array of humanity. . . [and] favored images that represent counterstereotypes. . . [One image] is a drawing of a construction worker with hard hat on, breast-feeding her baby. Her aim is to build up associations counter to the stereotypic ones that are strengthened in the rest of her daily life through observation and media exposures.[238]

Regardless of whether it is done with images on our computers, phones, or other electronic devices, images on the walls of spaces we inhabit, or other media to which we are exposed,[239] each of us can select the images that surround us and affect our attitudes and the stereotypes we harbor.[240]

B. *Institutional Action*

Within companies, educational institutions, faith communities, non-profit organizations, and community organizations, there are opportunities for organizing, promoting, and institutionalizing some of the individual activities described in the previous section of this article on a broader and potentially more impactful scale.

1. *Unconscious Bias Training*

The research described in previous sections of this article supports the conclusion that unconscious bias training ("UBT") can be

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the-power-of-healing-our-own-racism-with-dorothea-hrossowyc-and-ingrid-helander, *archived at* https://perma.cc/JQ3X-54UF.

238. BANAJI & GREENWALD, *supra* note 23, at 151–52.

239. *See* discussion in Section III(E)(4).

240. A gallery of portraits at Boston Law Collaborative, LLC, inspired by Prof. Banaji's technique, includes photographs of Maya Angelou, Cesar Chavez, Albert Einstein, Mahatma Gandhi, Helen Keller, Martin Luther King, Aung San Suu Kyi, Nelson Mandela, Harvey Milk, Barack Obama, Rosa Parks, and Eleanor Roosevelt.

effective as a de-biasing strategy, but it may not make much of a difference if not sustained.[241] Two other factors may impact the effectiveness of UBT: the skill of the trainer(s) and the quality of the curriculum. Recent years have seen a proliferation of curricula, programs, and workshop leaders.

Some may wonder how to find a competent trainer for DEI (diversity, equity, and inclusion) programming. Due to the lack of uniform training programs and uniform certification, we advise finding a trainer mainly based on personal recommendations. In addition, there are a number of train-the-trainer programs, which vary considerably in content, scope, and costs; those programs "certify" the participants who enroll in their workshops. However, there does not seem to be a performance-based certification of DEI trainers—at least not in the United States.[242]

As to the curriculum for DEI programs that address the problem of unconscious bias, one researcher, Barbara Applebaum, contends that training focused on microaggressions—one of the major impacts of bias—is likely to be more impactful than a workshop that focuses primary on bias-reduction.[243] And Katharine Bartlett, noting that workplace DEI trainings are famously unpopular with employees (but more so with men than with women), recommends that workshops should be "designed to motivate people to do the self-examination necessary to reduce unconscious bias."[244]

There are conflicting conclusions in the research about whether UBT is ineffective or counterproductive if it is mandatory, as opposed to voluntary. These results may be affected by the incentives offered to employees for participating (as opposed to punishment for failing to participate), the extent of support for the organization's anti-bias goals, the effectiveness of the training itself, and many other factors. The UK study cited earlier in this article[245] finds scientific support—albeit not robust—for the use of mandatory UBT in organizations. Dobbin et al. (2016) compared voluntary and mandatory UBT in 829 midsize and large companies in the U.S. and found that the former was associated with gains in the number of women and minorities in

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241. *See* note 19, *supra,* and accompanying text; *see also* Bodenhausen et al., *supra* note 152 (noting "rebound effect" after trainings).

242. *See, e.g.*, Simona Iancu, *8 Best Diversity & Inclusion Certifications of 2022* (Blog) (listing eight DEI 'certifications' for 2022), https://www.aihr.com/blog/best-diversity-and-inclusion-certifications, *archived at* https://perma.cc/9G2V-TGPE.

243. *See* Barbara Applebaum, *Remediating Campus Climate: Implicit Bias Training is Not Enough*, 38 STUD. PHIL. & EDUC. 129, 129 (2018).

244. *See* Bartlett, *supra* note 60, at 1962.

245. ATEWOLOGUN ET AL., supra note 19.

management, while the latter was associated with a reduction in those numbers.[246]

One other consideration: there could be legal risk for employers (and possibly other institutions, such as non-profits and publicly funded organizations) in offering UBT, if attendance is required. The political backlash against anti-racist initiatives has led to the passage of legislation in several U.S. states that explicitly prohibits employers from requiring employees to participate in diversity training.[247] However, it appears that the use of *voluntary* trainings may escape such prohibitions.[248]

2. *Discussion Groups and Affinity Groups*

One of the ways that organizations can maximize the impact of UBT is by creating, or by allowing the organization's resources to be used for, discussion groups that build on what was learned in the UBT. These groups can explicitly support the goals of bias reduction through increasing awareness of bias and its effects and may also—depending on the diversity of the group—support the goals of increasing intergroup contact, individuation, perspective-taking, and stereotype reduction.

Affinity groups, also known as employee resource groups, typically include people with a common identity. They are intended to provide mutual support and increased agency for a group (based on race, gender, sexual orientation, etc.) who may feel marginalized within the organization.[249] We are not aware of research that shows whether the existence of such groups reduces the prevalence of bias within an organization, but it seems likely that affinity groups could help an organization maintain its bias-reduction commitment and could increase self-agency in promoting change.[250]

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246. *See* Frank Dobbin & Alexandra Kalev, *Why Diversity Programs Fail*, 94 Harv. Bus. Rev. 52, 61 (2016).

247. *See, e.g.*, Marguerite Ward, Florida's 'Anti-Woke' Law Could Scare Off CEOs from Doing Diversity Training, But There Are Alternatives for Leaders Who Still Want to Create Inclusive Cultures, Insider (July 14, 2022).

248. *See id.* (businesses can choose to "not make their [diversity, equity, and inclusion] trainings mandatory").

249. Businesses and other organizations that are considering the creation of employee resource groups should consult counsel about the extent to which there could be legal risk of the kind described in Michael Paulson, *New 42 Worker Files Bias Lawsuit Over Diversity Training*, N.Y. Times, June 9, 2022, at 3.

250. There is support for this view in the research showing that training about gender bias increased agency among women. *See* Carnes et al., *supra* note 47 (noting greater "self-efficacy to engage in gender-equity-promoting behaviors).

3. *Diverse Teams*

Katharine Barnett contends that one of the most robust interventions to counteract bias is to create opportunities for members of each ingroup and outgroup to work together collaboratively in an egalitarian manner:

> Collaborative work cultures that minimize status differentials address the conditions that feed stereotyped thinking. Working together allows people to get to know each other and motivates them to form accurate assessments of one another, not stereotyped ones. Collaboration puts people in situations in which they are more likely to share the personal information upon which common bonds can be formed, and are thus less likely to stereotype.[251]

There is empirical support for this proposition in Van Bavel (2008), describing experiments that harness the power of ingroup bias for multiracial teams.[252] The study showed that creating a *group* identity—a novel self-categorization—can override identities that would have otherwise been more salient, such as race.[253] In a study by Gaertner and Dovidio (2005), the instruction that the White study participant would be "on the same team" with a Black teammate competing against another team likewise resulted in a reduction of implicit bias.[254] And another study by Dovidio et al. (2004) found that White participants had less implicit bias against Black people when the researchers asked them to imagine that they were all facing an attack by Al Qaeda.[255] The effect was more pronounced when participants were told that the intended targets of the supposed attack included both Black and White people in the United States. The researchers described the study as "confirming evidence of the potential of manipulations that foster the development of a common ingroup identity to reduce intergroup bias," where the "ingroup" is interracial.[256]

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251. Bartlett, *supra* note 60, at 1962.

252. *See generally* Jay Van Bavel, "A Multi-Level Approach to Intergroup Perception and Evaluation" (2008) (Ph.D. Thesis, University of Toronto), https://www.academia.edu/2851348/Novel_Self_categorization_Overrides_Racial_Bias_A_Multi_level_Approach_to_Intergroup_Perception_and_Evaluation, *archived at* https://perma.cc/USG2-CC3U.

253. *See id.* at 96.

254. *See* Gaertner & Dovidio, *supra* note 67, at 633.

255. *See* Dovidio et al., *supra* note 83, at 1537.

256. *Id.* at 1547.

Limitations to the intergroup contact approach include the novelty of such direct confrontation for participants and possible subsequent discomfort that needs to be adequately addressed by trained facilitators. This challenge has been pointed out by one of us previously:

The [participants] might experience dialogue work as an extremely new and uncomfortable process, so it is our duty [as trainers] to navigate the participants through productive dialogue and thereby allow them to collaborate effectively. It is less about exploring the facts of a dispute or who did what, and more about mastering the dynamics of communication, tolerance, and respect.[257]

4. *Articulated Commitment to Bias Reduction*

When organizations articulate bias-reduction as a goal and take concrete steps to advance that goal (as opposed to creating an appearance that the stated goal is just 'window dressing'), they support conscious awareness of bias and the effects of bias. Such organizational goals can also reinforce individual motivation to reduce bias.

C. *Techniques for Counteracting the Impacts of Bias*

Despite the growing number of tools available to individuals and organizations for the reduction of bias, and despite the evidence of a gradual reduction in certain kinds of bias in recent years,[258] unconscious bias persists and will likely remain a problem for our society and for the world. Accordingly, bias reduction strategies of the kind described in this article need to be supplemented with techniques for counteracting the *impacts* of bias. A few such techniques are described below, but the list is not intended to be comprehensive.

1. *Screening*

One of the best-known techniques for reducing the impacts of bias arose from a simple change in the methods used for selecting musicians for symphony orchestras.[259] Researchers found that by using a screen to conceal the candidate's identity from the jury, the

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257. Helen Winter, *Working from the Heart,* in More Justice, More Peace: When Peacemakers Are Advocates 62 (The ACR Practitioner's Guide Series) (Susan Terry ed., 2020); *see also* Winter et al*., supra* note 207.

258. *See* Matthew Hudson, *Implicit Biases toward Race and Sexuality Have Decreased*, 320 Sci. Am. 4 (2019) (showing societal reduction in certain kinds of bias).

259. *See generally* Claudia Goldin & Cecilia Rouse, *Orchestrating Impartiality: The Impact of "Blind "Auditions on Female Musicians*, 90 Am. Econ. Rev. 715 (2000). It is worth noting that the use of resumes without identifying information (such as

probability that a woman would be hired increased significantly.[260] Using a similar approach, some companies have experimented with removing information from job applicants' resumes so that those reviewing the applications will be deprived of information about gender, race, and other characteristics.[261]

2. *Visibility*

Another well-known study—this one in the world of athletics—showed that public visibility of the effects of bias can change behavior in a meaningful way.[262] Social scientists tallied the extent to which the "foul calls" by referees in NBA basketball games correlated with either the race of the player, the race of the referee, or both. The results—reported by the New York Times in 2007—showed that (a) White referees called more fouls proportionately on Black players than on White players, and (b) to a lesser extent, but still disproportionately, Black referees called more fouls on White players than Black players.[263] Despite the widespread media attention generated by this report, there is no record of the NBA implementing a diversity awareness training of any kind for its referees. Nevertheless, when researchers compiled data four years later, they found that the racially skewed pattern of foul calls had completely disappeared,[264] suggesting that publicly documenting patterns of bias can bring about meaningful change.

3. *Accountability*

Bartlett (2009) contends that accountability is one of the most robust methods of counteracting the effects of bias.[265] By establishing metrics for recruitment, retention, and promotion of people from

name, gender, nationality, and photograph) does not always produce the intended effect of creating more opportunity for people from historically marginalized groups. *See* Luc Behaghel et al., *Discrimination in Hiring and Anonymous CVs in France (CV Anonymes),* Abdul Latif Jameel Poverty Action Lab Blog, https://www.povertyactionlab.org/evaluation/discrimination-hiring-and-anonymous-cvs-france-cv-anonymes, *archived at* https://perma.cc/8NRH-K44R.

260. *See* Goldin & Rouse*, supra* note 259, at 737.

261. *See* Behaghel et al. *supra* note 259.

262. *See generally* Devin G. Pope et al., *Awareness Reduces Racial Bias,* 64 MGMT. SCI. 4988 (2018).

263. *See id.* at 4988.

264. *Id.* at 4990–91.

265. *See* Bartlett, *supra* note 60, at 1960–64.

marginalized groups, organizations improve the likelihood that conscious intention will override bias in personnel-related decision-making.[266] Many organizations also use surveys to measure the extent to which employees or members of the organization feel marginalized, so they have a benchmark against which to measure change. A tool used by Google in its diversity efforts was to eliminate one-person decision-making in personnel matters, on the theory that having several people involved would necessitate the articulation of criteria, so that conscious factors (rather than unconscious factors) would be used to evaluate candidates.[267] Checklists are another tool organizations employ to increase the use of rational criteria rather than unconscious bias in decision-making.[268] Many law firms have begun using the Mansfield Rule to promote accountability in advancement: requiring firms to include among candidates for governance positions and other important opportunities at least 30% women, unrepresented minorities, LGBTQ+ lawyers, and lawyers with disabilities.[269] In the world of dispute resolution, a similar initiative, the Ray Corollary, seeks to promote accountability in the selection of mediators and arbitrators.[270] These techniques are not, of course, mutually exclusive, and complement efforts to reduce individuals' bias.

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266. *See id.*

267. *See* Ruth Umoh, *Top Google recruiter: Google uses this 'shocking' strategy to hire the best employees,* CNBC.com (Jan. 10, 2018), https://www.cnbc.com/2018/01/10/google-uses-this-shocking-strategy-to-hire-the-best-employees.html, *archived at* https://perma.cc/4TR5-AKJG.

268. *See generally* Robert H. Ashton, *Effects of Justification and a Mechanical Aid on Judgment Performance*, 52 ORG. BEHAV. & HUM. DECISION PROCESSES 292 (1992); s*ee also* Pradeep Joseph, *Eliminating Disparities and Implicit Bias in Health Care Delivery by Utilizing a Hub-and-Spoke Model*, 4 RSCH. IDEAS & OUTCOMES e26370 (2018) (checklists reduced race, gender, and ethnic biases in healthcare decision-making).

269. *See* Dan Roe, *Newest Mansfield Rule Broadens Leadership Hiring Considerations, Pushes for Transparent Advancement and Compensation Policies,* The American Lawyer (Aug. 16, 2022), https://www.law.com/americanlawyer/2022/08/16/newest-mansfield-rule-broadens-leadership-hiring-considerations-pushes-for-transparent-advancement-and-compensation-policies/?slreturn=20220930094746, *archived at* https://perma.cc/8GJX-BQXH.

270. *See generally* Homer C. La Rue, *A Call - And a Blueprint - for Change*, 27 DISP. RESOL. MAG. 6 (2021).

4. *Deliberation*

Slowing down decision-making can help in de-biasing it.[271] With the help of fMRI imaging, cognitive psychologists have identified areas of the brain that are differentially activated in White subjects who are exposed to images of Black people (as compared to images of White people), even when the images were subliminal.[272] A practical application of this principle can be seen in a case study reported by Stanford psychologist Jennifer Eberhardt involving a social media application called Nextdoor.com.[273] The application, which links neighbors with each other in more than 200,000 communities, was criticized due to the extent of racial profiling in the online posts—for example, White people posting messages about "suspicious Black men." Eberhardt, who was hired as a consultant by NextDoor.com, recommended changes in the software that would (a) slow down participants' reactions, (b) urge them to consider the possibility of bias, and (c) require a description of specific behaviors. The company implemented these changes and reduced racial profiling by 75%.[274]

V. Unanswered Questions

In our research for this article, we encountered a number of questions that warrant further study.

A. *Intersectionality*

Like our conscious biases, our unconscious biases are complex and intersectional. As a result, the use of the IAT and other tools for measuring unconscious bias needs to be adapted to take into account the multiple ways in which bias shows up.[275] In the measurement of

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271. *See* Jerry Kang et al., *Implicit Bias in the Courtroom,* 59 UCLA L. Rev. 1124, 1177 (2012) ("One way to counter [implicit biases] is to engage in effortful, deliberative processing. But when decisionmakers are short on time or under cognitive load, they lack the resources necessary to engage in such deliberation.") (citations omitted).

272. *See* Cunningham et al., *supra* note 21. *See also* Jordan R. Axt et al., *The Judgment Bias Task: A Flexible Method for Assessing Individual Differences in Social Judgment Biases*, 76 J. Experimental Soc. Psych. 337 (2018) (experimental subjects produced more biased decisions, based on physical attractiveness bias, when required to make decisions quickly).

273. *See* Jennifer L. Eberhardt, Biased: Uncovering the Hidden Prejudice That Shapes What We See, Think, And Do 184–88 (2019). Thanks to colleague Audrey Lee for suggesting this example.

274. *Id.* at 186.

275. *See generally* Kimberle Crenshaw, *Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics in* Feminist Legal Theory (Katherine Bartlett ed. 1991).

bias, it will be important to consider not only the multiple overlapping identities of the people who are facing bias, but also the identities of those whose bias is being measured. For example, one study showed more race bias among White males as compared with White females.[276] And, in a study of doctors' attitudes about obesity, the researchers found no difference between the negative attitudes of doctors compared to those of the general public, but they found that males generally (and male MDs) had a stronger implicit bias against overweight individuals as compared with their female counterparts."[277]

B. *Mind-Body Connections*

One intriguing study that we encountered showed that walking in tandem with a person who is a member of a marginalized group produced a reduction in unconscious bias.[278] The effect is more pronounced when the walking is synchronized. This study suggests that the positive effects of intergroup contact can be potentiated by performing a physical task together. Whether the synchronization matters because it is a shared challenge, or because a feeling of physical alignment causes a greater feeling of connection across lines of identity, this research finding is intriguing and raises interesting questions about whether bias-reduction strategies should incorporate some element of physical activity.

C. *Understanding the Neuroscience of Bias*

The neuroscience research cited above[279] shows that unconscious biases operate in different neural circuits than those that process conscious decisions and evaluations. Accordingly, there may be a promising avenue of bias-reduction research in the effort to determine how those quick-firing, biased circuits can be accessed directly

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276. *See* Galen V. Bodenhausen & Christopher D. Petsko, *Complications in Predicting Intergroup Behavior from Implicit Biases: One Size Does Not Fit All, in* The Cambridge Handbook of Implicit Bias and Racism (Jon A. Krosnick et al. eds. 2021).

277. *See* Janice A. Sabin et al., *Implicit and Explicit Anti-Fat Bias Among a Large Sample of Medical Doctors by BMI, Race/Ethnicity and Gender*, 7 PLOS ONE e48448, Nov. 7, 2012, at 6.

278. *See generally* Gray Atherton et al., *Imagine All the Synchrony: The Effects of Actual and Imagined Synchronous Walking on Attitudes Towards Marginalized Groups*, 14 PLOS ONE e0216585, May 14, 2019.

279. *See* note 21, *supra*, and accompanying text.

or subliminally in ways that can provide those circuits with corrective or unbiased associations.[280]

In addition, neuroscientific studies have enabled researchers to examine two different types of implicit bias: stereotypes (which are activated in the cognitive circuits of our brains) and attitudes (which are activated in the affective circuits of our brains).[281] Thus, interventions designed to counteract stereotypes may not be effective in changing attitudes and vice versa. These findings may lead to better strategies to combat both types of bias and the conclusion that individuals need a *group* of interventions, as opposed to any single type of intervention.

One promising area of neuroscientific inquiry involves an examination of the differing brain circuits that are activated when people process information about ingroup versus outgroup members. In a review of such studies, the researchers note that the ability to locate these circuits, using fMRI technology, might enable the targeting of "brain areas involved in intergroup bias with non-invasive brain stimulation techniques . . . to reduce or modulate intergroup bias."[282]

Finally, neuroscientific inquiries might answer questions about why various bias-reduction strategies (of the kind described in Part III of this article) work, or fail—for example, what changes in our brains are caused by mindfulness meditation, and how do those changes explain the reduction in unconscious bias?[283]

D. *Bias Malleability as a Function of Age*

Can bias-reduction efforts be more successful with children than adults? Until recently, little research has been done on age-related differences in the malleability of implicit bias.[284] In a 2021 study,

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280. In a 2009 study involving participants ranging in age from 40 to 91, Stewart et al. showed that cognitive neural circuits can override automatic responses, but that this inhibitory ability deteriorates with age. Brandon Stewart et al., *Age, Race, and Implicit Prejudice: Using Process Dissociation to Separate the Underling Components,* 20 PSYCH. SCI. 164, 166-67 (2009).

281. *See generally* David Amodio, *The Social Neuroscience of Intergroup Relations*, 19 EUR. REV. SOC. PSYCH. 1 (2008).

282. Pascal Molenberghs & Winnifred R. Louis, *Insights From fMRI Studies into Ingroup Bias,* 9 FRONTIERS PSYCH., 2018, at 9. Thanks to Jeremy Lack for suggesting this area of inquiry.

283. Thanks to Bill Glasner for posing this question.

284. *See, e.g.*, Antonya M. Gonzalez et al., *Reducing Children's Implicit Racial Bias Through Exposure to Positive Out-Group Exemplars,* 88 CHILD DEV. 123, 124 (2017) (suggesting "possible developmental differences in the malleability of implicit associations").

Antonya Gonzales et al. showed that a counter-stereotypical inter-
vention of the kind described in Part III(F) reduced implicit race bias
in children but had a greater impact on older children (aged 9 – 12)
than younger children (aged 5 – 8).[285] The researchers suggest that
the older children may be at an age where they are doing more
mental categorization of people based on race, gender, and other fac-
tors than the younger children.[286]

A simple intervention for adult participants in the study that in-
volved hearing several stories about Black children who engaged in
prosocial actions (for example, helping someone who fell) and White
children who engaged in antisocial actions (for example, ridiculing
the person who fell) did *not* result in bias reduction.[287] But a second
study, in which the researchers used the same stories and also pro-
vided the adult participants with explicit encouragement to associate
the image of the Black individual with the word "good" and the White
individual with the word "bad," resulted in implicit bias reduction im-
mediately after the intervention and also one hour later.[288] The re-
searchers concluded that "for adults, counter-stereotypical exemplar
exposure may be most effective when paired with diversity training
or other forms of explicit instruction."[289] The researchers also sug-
gested that "children's implicit racial bias may be more malleable
than that of adults due to the fact that they have relatively less expo-
sure to cultural stereotypes. As a result, exposure to counter-stere-
otypical exemplars in mainstream media, such as TV, movies, or
books, may be particularly effective for children."[290]

This research suggests many promising areas of inquiry, such as
whether different types of bias-reduction strategies—or combinations
of strategies—work better with people at different developmental
stages, and also whether the duration of bias-reduction effects varies
with age. Researchers can also shed light on whether age-related
patterns in the development of bias and susceptibility to bias-reduc-
tion strategies apply to all types of bias, or not. (For example, as peo-
ple age, are they just as prone to bias based on age and disability, or
less so.) And perhaps research about developmental differences in

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285. *See* Antonya M. Gonzalez et al., *Developmental Differences in the Malleability
of Implicit Racial Bias Following Exposure to Counterstereotypical Exemplars*, 57 DE-
VELOPMENTAL PSYCH. 102, 102 (2021).

286. *Id.* at 103.

287. *Id.* at 106–07.

288. *Id.* at 110.

289. *Id.* at 111.

290. *Id.* (citation omitted).

the malleability of bias will help us learn more about how biases are formed in the first place.

E. *"Sedative" Effects*

Several researchers have posed the following question: could prejudice reduction serve majority-group interests by undermining the motivation of minority groups to challenge the power asymmetry?[291] One put it this way: "Although positive intergroup contact decreases the prejudice that disadvantaged group members have toward powerful majorities, it also decreases their perceptions that they are targets of discrimination, their experience of relative deprivation and social injustice, and their support for redress policies and their orientation to collective action."[292] Another researcher called this a "sedative effect."[293] Further research and analysis is needed to explore how the benefits of bias reduction can be pursued while supporting collective action as an equally (or more) important priority.

F. *Societal Forces*

The IAT's public platform has provided social psychologists with test results from millions of individuals. In a recent analysis of approximately 7.1 million tests taken during the period from January 1, 2007, through December 31, 2020, Dr. Tessa Charlesworth and Prof. Mahzarin Banaji found a reduction in *explicit* bias in six areas: race, skin-color, sexual orientation, age, disability, and body weight.[294] However, with regard to *implicit* bias, the data show reductions in only the first three of these areas, with little reduction of unconscious bias based on age, disability, and body weight.[295]

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291. *See, e.g.,* MacInnis & Page-Gould, *supra* note 104; Durrheim & Dixon, *infra* note 292; Nikhil K. Sengupta & Chris G. Sibley, *Perpetuating One's Own Disadvantage: Intergroup Contact Enables the Ideological Legitimation of Inequality*, 39 PERSONALITY & SOC. PSYCH. BULL. 1391, 1393 (2013) (citing John Dixon et al., *'What's So Funny 'Bout Peace, Love and Understanding?' Further Reflections on the Limits of Prejudice Reduction as a Model of Social Change*, 1 J. OF SOC. & POL. PSYCH. 239 (2013)); McKeown & Dixon, *supra* note 102.

292. Kevin Durrheim & John Dixon, *Intergroup Contact and the Struggle for Social Justice, in* OXFORD HANDBOOK OF SOCIAL PSYCHOLOGY AND SOCIAL JUSTICE 3 (Phillip L. Hammack Jr. ed. 2016) (citations omitted).

293. Joanna Burch-Brown & William Baker, *Religion and Reducing Prejudice,* 19 GROUP PROCESSES & INTERGOUP RELS. 1, 16 (2016) (citing several studies).

294. *See* Charlesworth & Banaji, *supra* note 27, at 1347.

295. *Id*. at 1352. One of the noteworthy conclusions findings relates to the question of whether IAT response data are skewed by self-selection—i.e., are the biases of people who choose to take the IAT different from those of people who do not. Charlesworth and Banaji note that approximately 76% of the people who take the IAT are

Charlesworth and Banaji also found that there were upticks in race, disability, and weight bias from 2015 through 2017—changes that correlate with Donald Trump's first U.S. presidential campaign (and some of the themes of his campaign), but those increases were relatively short-lived.[296] The authors also note other research showing reductions in implicit bias that correlate with social movements and the enactment of federal legislation.[297]

Based on this research, it is evident that interventions of the kind described in Part III of this article are not the only ways to reduce unconscious bias. However, the tracking of society-wide bias reduction could enable researchers to explore a number of important questions, such as:

- *Which types of implicit bias (besides the six listed above) are more impervious or less impervious to social change than others and why?*

- *Which biases (besides the six listed above) have the greatest divergence between explicit bias and implicit bias? What are the causes of that divergence?*

- *What society-wide interventions or societal changes are effective/ineffective in changing attitudes and stereotypes, and how do those vary from one type of bias to the next? Are some more effective with explicit bias and others more effective with implicit bias?*

- *What are the trends with regard to intersectional bias (for example, bias for or against Black women, as compared with White men, White women, and Black men)? Might there be some intersectional characteristics that are particularly responsive, or impervious, to societal impact?*

In addition to these questions, researchers could investigate whether insight into the types of societal forces that correlate with widespread bias reduction could point the way to more effective interventions for individuals and organizations, and vice versa. That is, whether the research summarized in Part III of this article might be deployed to shape society-wide interventions aimed at reducing bias.

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assigned to do so in connection with school or work, and that their results on the IAT do not differ materially from the results of those who take the IAT voluntarily.

296. *Id.* at 1369. Interestingly, these effects were found only in implicit, not explicit, attitudes. *See id.*

297. *Id.* (citing Eugene K. Ofosu et al., *Same-Sex Marriage Legalization Associated with Reduced Implicit and Explicit Antigay Bias*, 116 Proc. Nat'l Acad. Sci. 8846 (2019); Jeremy Sawyer & Anup Gampa, *Implicit and Explicit Racial Attitudes Changed During Black Lives Matter*, 44 PUBMED 1039 (2018)).

In addition, society-wide bias data can be useful in explaining not only the origins of individuals' biases but also the tendency for biases to return even after an individual's personal involvement in a bias-reducing activity.

In a hopeful perspective on the research to date, Charlesworth and Banaji suggest that interventions at the societal level might have greater impact than individuals' efforts: "[T]he current data—which reveal widespread, parallel change across most demographic groups—point to the interpretation that the most successful efforts for attitude change are likely to be macro-level, societal events that cut across demographic groups in similar ways."[298]

VI. Conclusion

Since the invention of the IAT in the mid-1990s, social psychologists have created an enormous body of research regarding the measurement of unconscious bias and the effectiveness of strategies for reducing such bias. Unfortunately, but perhaps not surprisingly, unconscious bias has proven highly resistant to change. This should be a concern for all and especially for those, such as mediators and lawyers, who have a professional responsibility to be unbiased.

Experiments in the laboratory and in the field provide a substantial basis for optimism that the interventions described in this article—awareness, motivation, individuation, perspective-taking, contact, stereotype replacement, and mindfulness—can be effective in reducing unconscious bias. Among the challenges is developing practices—for both individuals and organizations—that combine these strategies in ways that could prove to be synergistic and committing to sustain such practices over time. The well-worn path of one-and-done unconscious bias training has been shown to be woefully insufficient.

The research reviewed in this article suggests that implementation of bias-reduction strategies on an institutional level can be enhanced by an articulated and sustained commitment to equity and inclusion, the creation of diverse teams, the use of discussion groups and affinity groups, and periodic trainings.

On the individual level, each of us can be more intentional about shaping our indirect and direct contact and involvement with people whose lives and identities are different from our own—through our

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298. *Id.*

social experiences and our experience of the world through art, litera-
ture, and other media. In addition, we can be tenacious in self-exami-
nation, conscious of the stereotypes we hold, and intentional about
our motivation to make the world a better, less-biased place.