

Report of Anthony G. Greenwald, Ph.D.

Johnson et al. v. City of Seattle, *et al.*

King County Superior Court No. 15-2-03013-2 SEA

I, Dr. Anthony G. Greenwald, Ph.D., declare and state as follows based on my personal, scientific, technical, and specialized knowledge:

1. I have been retained by Plaintiffs' counsel in the above captioned case to provide expert witness testimony concerning psychological understanding of *implicit bias*.

2. I am a tenured faculty member of the University of Washington in the Department of Psychology where I have been an active member of its teaching and research faculty since 1986. As indicated in my *curriculum vitae*, attached as **Exhibit 1**, my undergraduate education was at Yale College (BA, *magna cum laude*, in 1959) and my graduate training was at Harvard University (M.A., 1961; Ph.D. in 1963). I was previously a tenured faculty member (Department of Psychology) at Ohio State University (1965-1986).

3. My areas of specialization are in social psychology, cognitive psychology, and research methodology. I have published more than 180 peer-reviewed journal articles and book chapters in these areas, including multiple publications in several of the most prominent scholarly journals of psychology (*Psychological Review*, *Psychological Bulletin*, *American Psychologist*, and *Psychological Science*), social psychology (*Journal of Personality and Social Psychology*, *Journal of Experimental Social Psychology*), and cognitive psychology (*Journal of Experimental Psychology*, *Journal of Experimental Psychology: General*, *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *Journal of Experimental Psychology: Human Perception and Performance*).

(A complete listing of my publications is contained in my curriculum vitae at **Exhibit 1**.)

4. As indication of recognition within my academic disciplines, I have received eight awards for career research achievements: *The Donald T. Campbell Award* (1995)

from the Society of Personality and Social Psychology, election as *Fellow of the Society of Experimental Psychologists* (1998), the *Thomas M. Ostrom Award* (2001) from the Person Memory Interest Group (the main organization of social cognition researchers), the *Distinguished Scientist Award* (2006) from the Society of Experimental Social Psychology, election to membership in the *American Academy of Arts and Sciences* (2007), the *William James Lifetime Achievement Award* from the Association for Psychological Science (2013), the *Kurt Lewin Award* from the Society for the Psychological Study of Social Issues (2015), and election to the Washington State Academy of Sciences (2015). Each of these recognitions is for career research contributions rather than for any single piece of work. My scientific publications have been cited by other researchers over 48,000 times (source: Google Scholar¹). My articles on implicit social cognition are among the most highly cited of these articles.

5. Throughout my career I have been active on journal editorial boards, including service from 1972 to 1979 as Associate Editor and subsequently Editor of the leading international journal of Social Psychology, *Journal of Personality and Social Psychology*. I currently serve on editorial boards of four prominent journals and provide evaluative reviews for a large collection of other leading journals, including the major general scientific periodicals, *Science*, *Nature*, and *Proceedings of the National Academy of Sciences*. (I have published articles in two of those three.)

6. My specialization that bears on this case is social psychological research on implicit social cognition, which includes the study of attitudes, prejudices, and stereotypes.

¹ <https://scholar.google.com/citations?user=U24uY0AAAAAJ&hl=en>

I and my collaborators have made numerous, substantial, and highly cited original research contributions concerning these topics during the last 25 years. The identification of implicit social cognition as a distinct research area was launched in a 1995 publication by Greenwald and Banaji, which has already received 4,748 citations.²

7. My studies of implicit social cognition [cognition = thinking] focus on *implicit bias*, which is now a very widely used label (introduced in an article of mine in 1995) for a class of mental processes that function outside of conscious awareness.³ Scientific understanding of implicit bias is based on research on attitudes and stereotypes.⁴ Attitudes are evaluations of groups of people (or other social categories), and stereotypes are beliefs about traits (attributes) that are taken to be characteristic of groups or categories of people.

8. My research on implicit social cognition includes invention and development of a research method—the Implicit Association Test (“IAT”). The IAT is widely described as an “implicit” measure because it measures strength of mental associations with tests that reveal those associations without requiring respondents to be aware that they possess these associations. The IAT has been successfully used as an

² Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, *102*, 4–27. The citation count is that reported by Google Scholar, 1 May. 2016.

³ The term “implicit bias” was first used in its current meaning by Greenwald and Banaji (1995), see Note 2 supra. Implicit bias has been defined in the legal context as “attitudes or stereotypes that affect our understanding, decisionmaking, and behavior, without our even realizing it”. (Kang, J., Bennett, M. W., Carbado, D. W., Casey, P., Dasgupta, N., Faigman, D. L., Godsil, R. D., Greenwald, A. G., Levinson, J. D., & Mnookin, J. L. (2012). Implicit bias in the courtroom. *UCLA Law Review*, *59*, 1124–1186; see also Greenwald, A. G., & Krieger, L. H. (2006). Implicit bias: Scientific foundations. *California Law Review*, *94*, 945–967.)

⁴ Greenwald and Banaji (1995), see Note 2 supra.

implicit measure for mental associations that underlie many stereotypes and social attitudes. My published research has included extensive study of implicit biases associated with race, ethnicity, gender, and other demographic categories.⁵

9. The psychometric properties (i.e., properties indicating conceptual validity and applied usefulness) of IAT measures have been validated with many participants in numerous laboratory and Internet research studies. Variations of the IAT have been taken more than 17 million times at the on-line educational site, <https://implicit.harvard.edu>. No method for measuring implicit biases is more widely used than the IAT. Many psychologists use the IAT as a method in their own scientific research. IAT measures have been subjected to repeated empirical testing and peer review. There exists near unanimous agreement among social psychologists as to the validity of the IAT as a method for implicit measurement of attitudes and stereotypes.⁶

⁵ E.g., Greenwald, A. G., McGhee, D. E., & Schwartz, J. K. L. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology*, *74*, 1464-1480.; Nosek, B. A., Smyth, F. L., Hansen, J. J., Devos, T., Lindner, N. M., Ranganath, K. A., Smith, C. T., Olson, K. R., Chugh, D., Greenwald, A. G., & Banaji, M. (2007). Pervasiveness and correlates of implicit attitudes and stereotypes. *European Review of Social Psychology*, *18*, 36–88; Greenwald, A. G., Poehlman, T. A., Uhlmann, E., & Banaji, M. R. (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology*, *97*, 17–41; Greenwald, A. G., Smith, C. T., Sriram, N., Bar-Anan, Y., & Nosek, B. A. (2009). Race attitude measures predicted vote in the 2008 U. S. Presidential Election. *Analyses of Social Issues and Public Policy*, *9*, 241–253; Greenwald, A. G., & Pettigrew, T. F. (2014). With malice toward none and charity for some: Ingroup favoritism enables discrimination. *American Psychologist*, *69*, 669–684; Greenwald, A. G., Banaji, M. R., & Nosek, B. A. (2015). Statistically small effects of the Implicit Association Test can have societally large effects. *Journal of Personality and Social Psychology*, *108*, 553–561.

⁶ Even psychologists who have been called upon to testify in opposition to the relevance of implicit bias in specific legal actions have published evidence consistent with the IAT's validity in predicting racially discriminatory judgment and behavior, viz., Oswald, F. L., Mitchell, G., Blanton, H., Jaccard, J., & Tetlock, P. E. (2013). Predicting ethnic and racial discrimination: A meta-analysis of IAT criterion studies. *Journal of Personality and Social Psychology*, *105*, 171–192. The IAT was recognized in 2013 with the Society of Personality and Social Psychology's *Methodological Innovation Award*.

10. The concept of *implicit bias* adds to and, in domains involving race and ethnicity, supersedes previously dominant psychological conceptions of mental processes that produce discriminatory judgments and behavior. The previously dominant conceptions viewed human actors as guided solely by their openly expressed (“explicit” or consciously aware) beliefs and by their *conscious intentions* to act. In the last 20 years, scientific studies of implicit social cognition have replaced these previous conceptions by showing that human actors often lack conscious (“introspective”) awareness of knowledge that underlies both their social perceptions and the judgments that guide their actions toward others. That is, actions toward others have repeatedly been found, in recent research studies, to be based on unrecognized mental associations triggered by knowledge of the demographic categories to which others belong, including race, gender, age, ethnicity, disability status, sexual orientation, and more.

11. I base opinions rendered in this case on the results of my own research and also on my knowledge of works by other scientists who have conducted and published research relevant to the conditions of this case. I have become acquainted with the conditions of this case by reading the Complaint (dated February 5, 2015) filed by Plaintiffs’ attorneys.

12. I conclude that the findings of existing research regarding implicit bias provide a framework that can aid a judge or jury in evaluating the facts of this case, to better understand the evidence as it relates to discriminatory intent, to counteract common misconceptions concerning the character of discriminatory intent, and to determine whether Plaintiffs’ racial status provided a basis for Defendants’ actions as outlined in the

Complaint. The remainder of this declaration summarizes my opinions based on scientific research and scholarship that relate to the conditions of the case.

13. **Implicit biases are pervasive and are often observed in more than 70% of Americans, most of whom genuinely and sincerely regard themselves as lacking in biases.** Research using IAT measures finds that persons are often unaware of discrepancies between (on the one hand) their explicitly expressed—and often genuinely endorsed—egalitarian beliefs and attitudes and (on the other hand) the implicit stereotypes and attitudes that are revealed by their IAT measures. Research studies consistently find that a majority of persons who display implicitly biased associations on Implicit Association Test (IAT) measures are unaware of possessing those biases. This has been one of the most interesting, surprising, and consistent findings in the history of studies that have used the IAT to measure implicit biases.

14. In contrast to the relatively small percentages (typically less than 15%) of survey respondents who are willing to describe themselves as possessing “explicit” or “overt” racial biases, approximately 75% of research participants display implicit (sometimes called “unconscious”) biases based on African American (vs. White) race, Asian vs. American ethnicity, male vs. female gender, and other familiar demographic contrasts. These implicit biases are described in research publications as indicating “automatic preferences” (e.g., for White relative to Black Americans), or “implicit stereotypes” (e.g., associating male gender more than female gender with career).⁷

⁷ These figures are based on data from tens of thousands of respondents, as presented in Table 4 of Nosek, B. A., Smyth, F. L., Hansen, J. J., Devos, T., Lindner, N. M., Ranganath, K. A., Smith, C. T., Olson, K. R., Chugh, D., Greenwald, A. G., & Banaji, M. (2007). Pervasiveness and correlates of implicit attitudes and stereotypes. *European Review of Social Psychology*, 18, 36–88. Ottaway, S. A., Hayden, D. C., & Oakes, M. A. (2001). Implicit attitudes and racism: Effects of word familiarity and frequency on the implicit association test. *Social Cognition*, 19, 97-144;

Research also establishes that human behavior in relation to groups that are objects of implicit biases is guided less by explicit (i.e., overt, avowed) beliefs and intentions than is widely assumed. That is: (a) correlations of self-reported (i.e., overt, explicit) racial attitudes with discriminatory behavior have been observed in research to be weak; (b) in contrast, correlations of implicit racial attitudes with discriminatory behavior are statistically stronger; and (c) upon taking various of the implicit bias tests available for website visitors at <https://implicit.harvard.edu/implicit> many persons with self-expressed explicit egalitarian beliefs are unpleasantly surprised to discover that they have implicit racial preferences.⁸

15. **Implicit bias is scientifically established as a source of discriminatory judgment and decision making in personnel decisions.** There is now little doubt that implicit bias, in the form of unconscious attitudes and stereotypes, is a cause of discrimination. Numerous research studies have established that behaviors occurring in employment settings are influenced by implicit biases.⁹ Discrimination rooted in implicit biases is especially likely to occur in *subjective* evaluations of performance. When (a) personnel decisions are made in subjective, discretionary fashion and (b) non-discriminatory explanations can be rejected or are implausible, it is highly probable that observed treatment disparities in employment are caused, at least in substantial part, by

Livingston, R. W. S. (2002). Bias in the absence of malice: The phenomenon of unintentional discrimination. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 62(8-B), 3850; Axt, J. R., Ebersole, C. R., & Nosek, B. A. (2014). The rules of implicit evaluation by race, religion, and age. *Psychological Science*, 25(9), 1804-1815.

⁸ Greenwald, Poehlman, Uhlmann, & Banaji (2009), see Note 5 supra; Greenwald, Banaji, & Nosek (2015), see Note 5 supra.

⁹ See Chapter 3 and Appendixes 1 and 2 of Banaji, M. R., & Greenwald, A. G. (2013). *Blindspot: Hidden biases of good people*. New York, NY: Delacorte Press.

implicit bias associated with race, ethnicity, or gender. These implicit biases can constitute a substantial cause of disparate treatment in employment even when other non-discriminatory factors also contribute causally to the employment related decision.

16. **Implicit biases operate outside of (conscious) awareness.** Scientific definitions of implicit attitudes and implicit stereotypes characterize them as “introspectively unidentified”. In a widely cited 1995 publication Greenwald and Banaji defined *implicit attitudes* as “introspectively unidentified (or inaccurately identified) traces of past experience that mediate favorable or unfavorable feeling, thought, or action toward social objects” (p. 8); and they defined *implicit stereotypes* as “introspectively unidentified (or inaccurately identified) traces of past experience that mediate attributions of qualities to members of a social category” (p. 15).¹⁰ These implicit influences can produce discriminatory judgments and behavior in decision makers who have no awareness that they possess any trace of intention to produce disadvantage to those who have been adversely affected by their judgments.

17. **Ingroup favoritism as a correlate of implicit bias and a contributor to discriminatory outcomes.**¹¹ It has been recognized for some time that ingroup favoritism is an important factor in producing disadvantage to (among others) racial and ethnic minorities. This is in part commonsense reasoning that an advantage for Group A over

¹⁰ Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, 102, 4-27. [available at: http://faculty.washington.edu/agg/pdf/Greenwald_Banaji_PsychRev_1995.OCR.pdf]

¹¹ To minimize the need for a lengthy footnote, it is noted here that the conclusions summarized in this paragraph are extensively documented in: Greenwald, A. G., & Pettigrew, T. F. (2014). With malice toward none and charity for some: Ingroup favoritism enables discrimination. *American Psychologist*, 69, 669–684. [available at: <http://faculty.washington.edu/agg/pdf/Greenwald&Pettigrew.MaliceTowardNone.AP.2014.pdf>]

Group B can be produced as much by doing something selectively beneficial to Group A as by doing something selectively detrimental to Group B. Only recently, however, has it become apparent that selective benevolence can be more potent than selective malevolence in producing discriminatory outcomes. This observation may come as a surprise because those engaging in benevolent actions toward others similar to themselves (i.e., those engaging in ingroup favoritism) will routinely be aware only of their intentions to benefit others, while not recognizing that those to whom they are not providing similar benefits are put at a relative disadvantage by these helpful actions. This happens because many people are aware only of possessing explicitly egalitarian attitudes, while remaining unaware of powerful ingroup-favoring implicit attitudes. And, even though scientific development of the concepts of implicit bias in the past 20 years is gradually entering general knowledge through college courses and media attention, the science still codified in many college texts connects occurrences of racial and ethnic discrimination much more strongly to outgroup hostility than to ingroup favoritism. Recent studies of workplace behavior make clear the extent to which demographic similarity (shared ingroup membership) of managers and employees is a factor that can produce disadvantages to those outside the ingroup.¹²

18. **Discretion-affording personnel evaluations that permit subjectivity in decision making are open to influence by implicit bias.** Personnel evaluations include assessments of merit and decisions contingent on those assessments, including performance

¹² See Greenwald and Pettigrew (op. cit.); DiTomaso, N. (2012). *The American non-dilemma: Racial inequality without racism*. New York, NY: Russell Sage Foundation; Reskin, B. F. (1998). *The realities of affirmative action in employment*. Washington, DC: American Sociological Association; Rivera, L. A. (2012). Hiring as cultural matching: The case of elite professional service firms. *American Sociological Review*, 77, 999–1022.

reviews and decisions affecting salaries, raises, promotions, and terminations. The scientific field of organizational psychology has long accepted the principle that personnel evaluations in which the evaluator has leeway (discretion) to judge merit on the basis of non-standardized *subjective* criteria allow bias to invade evaluations. In the decades since acceptance of that principle, its scientific basis has continued to grow. Available research evidence supports the conclusion that consistent avoidance of bias requires use of personnel decision-making procedures based on *objective* criteria. The next five paragraphs (§§19–23) describe prominent recent articles by economists, organizational psychologists, and legal scholars, based on their consideration of research on the roles of subjectivity and discretion in personnel decision making. The eight paragraphs after those (§§24–31) summarize the articles’ conclusions in a fashion more accessible to non-scientists. These observations support the conclusions (a) that managerial subjectivity and discretion contribute to discriminatory outcomes resulting from implicit (and possibly also explicit) biases, and (b) that validated objective evaluation procedures can effectively avoid entry of such biases into managerial decisions.

19. **Prendergast, C., & Topel, R. H. (1996). Favoritism in organizations. *Journal of Political Economy*, 104, 958–978.** Prendergast and Topel observed that the situation of unavailability of objective measures of workers’ performances arises frequently in work settings. In that situation, “firms rely on subjective judgments by supervisors. Subjectivity opens the door to favoritism, where evaluators act on personal preferences toward subordinates to favor some employees over others” (p. 958). Prendergast and Topel additionally reviewed economist-authored scholarly articles, on the basis of which they concluded that employers desiring to operate effectively will reject subjective evaluation

procedures: “an optimal response by firms will be to make compensation less sensitive to [subjective] supervisor evaluations and to use bureaucratic rules placing ‘excess’ weight on noncorruptible [i.e., objective-indicator] signals” (p. 976).

20. **Wax, A. L. (1999). Discrimination as accident. *Indiana Law Journal*, 74, 1129–1232.** In this article, legal scholar Amy Wax focuses on discrimination based on race or sex. “Supervisors and employers purport to evaluate employees according to facially neutral criteria and often strive to apply those criteria in an evenhanded way. But if they have knowledge of the race or sex of the person being evaluated (which they ordinarily do), their judgments could possibly be affected by cognitive biases that are triggered by that knowledge” (p. 1137). “But the employer will not realize that these cognitive mechanisms are at work and will be oblivious to the way in which the application of neutral performance criteria, which he is attempting to apply in good faith, is skewed by his unconscious stereotypes. Such routine distortions of seemingly benign appraisals could potentially occur at all stages of the employment relationship, affecting decisions whether to hire, promote, discipline, assign responsibility, allocate rewards and benefits, or terminate the relationship altogether. The potential for these types of cognitive mechanisms to play a role would be greatest when assessments have an important subjective component—and especially where employers are making complex, multifactorial, discretionary judgments about ongoing workplace performance.” (pp. 1137–1138).

21. **Outtz, J. L. (2005). Race discrimination cases: Common themes (Pp. 201–228). In F. J. Landy (Ed.). (2005). *Employment discrimination litigation: Behavioral, quantitative, and legal perspectives*. San Francisco, CA: Jossey-Bass.** This book chapter by organizational psychologist James Outtz deals in part with discrimination

caused by “excessive subjectivity in performance appraisals” (p. 224). As a means of avoiding excessive subjectivity, Outtz observes that “subjectivity is minimized to the extent that (1) performance ratings are linked to important job behaviors or performance objectives, (2) there are written policies governing the manner in which performance ratings are to be made, (3) there is second-level review of the ratings, and (4) there is a procedure in place for resolving ratings disputes between employees and supervisors” (p. 224).

22. **Hart, M. (2005). Subjective decisionmaking and unconscious discrimination, *Alabama Law Review*, 56, 741–791.** In this article, law professor Melissa Hart considers the legal implications of “[c]ontemporary sociological and psychological research [, which] reveals that discriminatory biases and stereotypes are pervasive, even among well-meaning people. In fact, recent studies have focused particular attention on the unconscious biases of people whose consciously held beliefs are strongly egalitarian (p. 743).¹³ “[T]he potential for unconscious stereotypes and biases to intrude into the evaluation process is greatest when subjective judgments are involved” (p. 744). “When an employer permits largely uncabined discretion to its supervisors, the risk of the pervasive operation of unconscious biases and stereotypes in decisionmaking is considerable” (p. 788).

23. **Heilman, M.E., & Haynes, M.C. (2008). Subjectivity in the appraisal process: A facilitator of gender bias in work settings. In E. Borgida & S.T. Fiske (Eds.), *Beyond common sense: Psychological science in the courtroom*. (127–156). Oxford: Blackwell Publishing.** In this article, organizational psychologists Madeline

¹³ See also ¶30 of this declaration.

Heilman and Michelle Haynes focus on subjectivity as a factor contributing to discrimination against women. As was true of the Wax article (see ¶20), the arguments in this article derive from social science research that applies generally to the manner in which stereotypes affect employment decision making. “[Subjectivity] denotes an evaluative orientation that requires inference because judgments are based primarily on outcomes and criteria that are open to interpretation” (p. 128). “[T]he greater the subjectivity, the more opportunity for *stereotype-based expectations* [emphasis added] to influence evaluative judgments” (p. 127). “Paradoxically, contexts that are devoid of features that motivate evaluators to be accurate in their judgments can actually increase reliance on stereotype-based expectations” (p. 143). “[W]hen subjectivity exists, and inference is required for making evaluative judgments, [stereotype-based] expectations are likely to exert a powerful influence on evaluative outcomes” (p. 132).

24. **Objective and subjective measures in personnel evaluation.** An “objective” personnel evaluation typically results from a procedure that involves a defined method of counting quantities that produce numbers, such as numbers of products produced, clients served, contracts negotiated, dollars earned, or questions answered correctly on a test. In contrast, for “subjective” measures, evaluative judgments result from using information about the evaluatee in ways that are left partly or entirely unspecified—these measures involve discretion. In the context of evaluating faculty members for promotion, examples of objective indicators of performance quality would be counts of articles published, citations of those publications by other scholars, research grants obtained, courses taught, students supervised, scores of students on standardized tests of

knowledge in subject areas taught by the faculty member, and faculty committees served on.

25. **By itself, the use of numbers does not suffice to classify a measure as “objective”.** Consider: “In your judgment, did Employee X exceed expectations (=3), meet expectations (=2), or fall short of expectations (=1).” This measure is conceivably “objective” if (a) the assignment of numbers is governed by well-defined criteria specifying performances that validly justify assigning the numbers 1, 2, and 3, and (b) the supervisors who make these judgments receive training to assure that they **assign the numbers in ways that are consistent across different persons judging the same person and, for the same supervisor, consistent over time.** In the absence of meeting these conditions, this (widely used) form of workplace performance evaluation can produce numbers that comprise largely or entirely subjective judgments. The “In your judgment . . .” opening of the rating question provides the invitation to produce a subjective, discretionary judgment.

26. **Systematic use of *valid, objective measures* avoids discriminatory effects of implicit bias.** “Validated” objective measures are those for which numerical values either (a) are understood by themselves to reflect degree of achieving desired job performances or (b) have been established through research to have reliable correlations with previously established-as-valid indicators of meritorious job performance. The virtue of using valid objective measures is twofold: First, their validation warrants confidence in being able to effectively distinguish superior from inferior performers. Second, their consistent use pre-empts decision making based on subjective criteria, thereby denying the opportunity for decision-maker subjectivity that can result in either explicit or implicit bias.

27. **Rationale for expecting subjective (discretion-affording) personnel evaluations to produce discrimination.** Perhaps the only sure way to avoid discrimination when using discretion-affording procedures for personnel decision making is to use one’s discretion to opt for a randomizing device to make decisions: Although the resulting decisions won’t be optimal or effective in a business sense, lottery-based decisions for hiring, raises, promotions, and terminations will surely avoid discriminatory impact. As explained in the next three paragraphs, however, when **neither randomizing devices nor valid objective criteria are used, personnel decisions are likely to show discriminatory impact due to implicit bias.** For example, when managers provide personnel evaluations and **make personnel decisions subjectively (i.e., with discretion)** without justifying those decisions in terms of objective indicators of performance, implicit attitudes and stereotypes are highly likely to be elevated to roles that they could not otherwise play as contributing factors to those judgments and actions.

28. **Influences of implicit bias on discretionary personnel decisions: Who gets stereotyped?** There exists a “default” set of demographic characteristics for “American”. Someone who is identified only as American will likely be assumed also to be a person who is White, young adult, male, and able-bodied. These default characteristics are also the ones that, when encountered in a newly met person, will be *least* likely to result in the person being perceived through the lens of a stereotype. For those others who are not described by the default characteristics—including African Americans, Native Americans, Asian Americans, Hispanic Americans, women, the elderly, and the disabled—stereotypes are far richer, and many of those stereotypes are negative.¹⁴

¹⁴ These conclusions are supported in detail in Chapter 5 (“*Homo Categoricus*”, pp. 72–93)

29. **Influences of implicit bias on discretionary personnel decisions: What is the consequence of being stereotyped in the workplace?** Stereotypes of most of the groups mentioned in ¶28 involve expectations that they will have relatively weak intellect and limited or no capacity for leadership. Employees in positions of responsibility who are racial or ethnic minorities may therefore often be assumed to have achieved their positions due to diversity/inclusion policies that favored them over more qualified others. As a result, persons who are members of under-represented groups may inappropriately be judged to be least worthy of hiring, promotion, or retention.¹⁵

30. **Damaging impact of implicit bias on quality of workplace interactions.**

In a sustained program of research, psychologists Samuel Gaertner and John F. Dovidio described a characteristic of many White Americans who, despite sincerely viewing

of *Blindspot: Hidden biases of good people* (Delacorte Press, 2013; authors: Mahzarin R. Banaji and Anthony G. Greenwald).

¹⁵ McCarthy, J. M., Van Iddekinge, C. H., & Campion, M. A. (2010). Are highly structured job interviews resistant to demographic similarity effects? *Personnel Psychology*, 63, 325-359; Rooth, D.-O. (2010). Automatic associations and discrimination in hiring: Real world evidence. *Labour Economics*, 17, 523–534; Agerström, J., & Rooth, D.-O. (2011). The role of automatic obesity stereotypes in real hiring discrimination. *Journal of Applied Psychology*, 96(4), 790-805; Ziegert, J. C., & Hanges, P. J. (2005). Employment discrimination: The role of implicit attitudes, motivation, and a climate for racial bias. *Journal of Applied Psychology*, 90, 554–562. Findings having to do specifically with application of disadvantaging stereotypes of Asian Americans in work settings can be found in: Berdahl, J. L., & Min, J.-A. (2012). Prescriptive stereotypes and workplace consequences for East Asians in North America. *Cultural Diversity and Ethnic Minority Psychology*, 18(2), 141-152; Ginther, D. K., Schaffer, W. T., Schnell, J. Masimore, B., Liu, F., Haak, L. L., & Kington, R. (2011). Race, Ethnicity, and NIH Research Awards. *Science*. 333, 1015–1019; Samson, F. L. (2013). Multiple group threat and malleable White attitudes towards academic merit. *Du Bois Review*, 10, 233–260; Samson, F. L. (2013). Altering public university admission standards to preserve White group position in the United States: Results from a laboratory experiment. *Comparative Education Review*, 57, 369–396; Sue, D. W., Bucceri, J., Lin, A. I., Nadal, K. L., & Torino, G. C. (2009). Racial microaggressions and the Asian American experience. *Asian American Journal of Psychology*, 5(1), 88-101; and Yan, W., & Lin, Q. (2011). What accounts for tenure of Asian American faculty? Findings from NSOPF: 04. In X. L. Rong & R. Endo (Eds.), *Research on the education of Asian and Pacific Americans. Asian American education—Identities, racial issues, and languages* (pp. 159-179). Charlotte, NC: IAP Information Age Publishing.

themselves as egalitarian, nevertheless display subtle forms of race or ethnicity bias, such as by being more ready to offer help to Whites than to equivalently help-needing African Americans or other minorities. Gaertner and Dovidio have documented how these White egalitarians are prone to interracial interactions marked by discomfort or anxiety that will prompt a desire to avoid or withdraw from the interaction.¹⁶ This discomfort occurs asymmetrically (i.e., it is experienced more by the White than by the minority participant in an interaction). As a consequence, the White's discomfort can produce unintended disadvantage to the minority participant. To illustrate: In an interaction between a White supervisor and an Asian employee, or between a White interviewer and an Asian job applicant, the White participant may feel uncomfortable, but without recognizing that implicit bias is contributing to the experience of having an awkward interview. The White participant may inappropriately attribute the lack of warmth in the interaction to some deficiency of the minority participant.

31. **Enhanced role of race and ethnicity in workplaces in which these groups are under-represented.** A long-established social psychological principle is that identifiably distinctive features of whatever kind (height, weight, hair color, age, race, ethnicity, sex, disability status) are salient (i.e., noticed and responded to) to the extent that they are infrequent in a group setting. As a consequence, attitudes and stereotypes associated with a group identity that is rendered salient by its infrequency in a work setting

¹⁶ Because this discomfort does not correspond to what is ordinarily understood as “racism”, others have preferred the alternative label of “uncomfortable egalitarianism”. Much of this history of Gaertner and Dovidio’s work is described in: Gaertner, S. L., Dovidio, J. F., Banker, B., Rust, M., Nier, J., Mottola, G., & Ward, C. M. (1997). Does racism necessarily mean anti-blackness? Aversive racism and pro-whiteness. In M. Fine, L. Powell, L. Weis, & M. Wong (eds.), *Off white* (pp. 167–178). London: Routledge.

are more likely to become active (i.e., influencing judgment and action) than in a work setting in which this group is more substantially represented. As a consequence, the likelihood that implicit attitudes and stereotypes associated with plaintiffs' race or ethnicity will influence others' judgments about and actions toward them is greater than if there were more representatives of their groups in the work setting.

32. **In summary:** Implicit biases are pervasive and are often observed in more than 70% of Americans, most of whom sincerely regard themselves as (non-prejudiced) egalitarians. Implicit bias is scientifically established as a source of discriminatory judgment and decision making in personnel decisions. Discretion-affording personnel evaluations that permit subjectivity in decision making are open to influence by implicit bias. Based upon my knowledge of social psychological research on attitudes and stereotypes, and my review of the Complaint, I believe these general principles and the opinions related to them stated in this report apply to the evaluation of the facts of this case.

33. **Postscript.** I understand that discovery is ongoing in this matter. If evidence in addition to that which I have already reviewed relevant to my opinions is discovered or produced, I reserve the right to amend this report accordingly.



Dr. Anthony G. Greenwald, Ph.D.

4 May 2016

Dated

Appendixes

Exhibit 1: Anthony G. Greenwald, curriculum vitae

Exhibit 2: Anthony G. Greenwald, prior testimony

Exhibit 3: Anthony G. Greenwald, consulting fee schedule