APPENDIX A

At the request of plaintiff's counsel and pursuant to Rule 26(a)(2) I hereby submit the following report which summarizes the expert testimony I expect to give in this case.

- 1. I have been retained by Plaintiff's attorneys to offer opinion on social and cognitive forces that will influence predictions of problems caused by integrating a person with homosexual orientation into an ongoing work group.
- 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, provided as Attachment 1, my undergraduate education was at Yale College (BA 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 170 refereed journal articles and book chapters in these areas, including multiple publications in several of the most important scholarly journals of psychology (Psychological Review, Psychological Bulletin, American Psychologist, 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 (Attachment 1).
- 4. My specialization area that bears on this case is in research on social cognition, a field to which I have made substantial original research contributions throughout my career.

EXHIBIT # .

DATE __

WITNESS .

JAN NICKELL, RPR

- 5. As indication of recognition within my academic disciplines, I have received five 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, and election to membership in the American Academy of Arts and Sciences (2007). Each of these recognitions is for career research achievements rather than for any single piece of work. My scientific articles (not including book chapters) have been cited by researchers over 9000 times (source: ISI: Web of Science). My articles on social cognition are among the most highly cited of these articles.
- 6. 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 approximately thirty other leading journals, including the major general scientific periodicals, *Science* and *Nature*.
- 7. In considering the context for Plaintiff's attorneys' request in the case of Witt vs. Air Force, I focused especially on influences that should be experienced by those with responsibility to act on allegations that a member of a military unit is homosexual. This question can be addressed both in terms of empirical observation and in terms of scientifically established descriptions of processes that affect social judgment and social influence. Consistent with my

basis for expertise, plaintiff's attorneys asked me to focus on the relevant scientific theory rather than on the empirical aspect.

- 8. To address the question in terms of relevant scientific theory, I considered available research findings and theoretical principles from the social psychological fields of social judgment and social influence. Considering this work, in my opinion decision makers will be prone to substantially over-predicting problems that arise from integrating a homosexual member into a military unit. Furthermore, in the specific case of Major Witt, conditions in the 446th Aeromedical Evacuation Squadron were such that this analysis should apply to the decision makers responsible for acting in response to the disclosure of her homosexuality.
- 9. I limited my analysis to influences on judgments that would affect a hypothetical military decision maker who might be a commanding officer, a hearing panel member, or someone higher in the chain of command responsible for acting in response to an allegation that a unit member is suspected of being homosexual. I identified four factors (Points 1–4 in the following) that might lead the decision maker to overestimate damaging effects of presence of a homosexual on a military unit's cohesion and performance. My analysis of these four factors

Empirical knowledge of effects of retaining known homosexuals in military units is available through studies of military forces in other countries that have transitioned to policies of accepting self-identified homosexuals. Empirical knowledge is also available for United States military units in the form of survey studies of military personnel on the topic of acceptability of homosexuals as members of military units. In the course of researching the question posed to me, I learned that survey studies of military personnel have shown increasing acceptance of gay and lesbian members of military units (e.g., "Study of Iraq and Afghanistan Veterans Questions Assumptions Behind 'Don't Ask, Don't Tell'", at http://www.rand.org/news/press/2009/11/09/; and W. R. McMichael & B. McGarry, "Exclusive Militarywide Survey: How Troops Really Feel About Gays Serving Openly", in *Military Times*, February 15, 2010). The first of these surveys showed drop in support of DADT from 75% in 1993 to 40% in 2006. The second showed a similar rate of decline over a shorter interval, and also that there is greater acceptance of service by gays among younger than older service members, among women than among men, among racial minorities than among whites, and that acceptance of homosexuals is greater in the Air Force and Navy than in the Marines or Army.

In the case of Major Witt, declarations by a dozen members of the 446th Aeromedical Evacuation Squadron, provided between February 24, 2005 and March 5, 2010, have made clear that the effects of initiating her discharge were more likely than not to damage unit cohesion and effectiveness. Those who provided these declarations indicated not only that they saw the 446th as functioning effectively during a period before initiation of discharge proceedings (at a time when Major Witt's homosexuality was widely inferred by unit members) and also that the initiation of discharge proceedings against Major Witt in 2004 produced damaging effects on cohesiveness and performance of the 446th.

assumes a situation in which the decision maker acts in the absence of any effort to probe beliefs and opinions of unit members on the topic of impact of the homosexual's discharge versus retention on the unit's morale and performance effectiveness.

- 10. Point 1. In an effectively functioning unit having members who are unannounced homosexuals, a decision maker is more likely than not to underestimate the unit's homosexual membership and may incorrectly assume that the unit has few or no homosexuals. This underestimation of the presence of homosexuals exemplifies the established phenomenon of pluralistic ignorance, which has been described as "develop[ing] most commonly under circumstances in which there is widespread misrepresentation of private views. In these cases, people's tendency to rely on the public behavior of others to identify the norm leads them astray, for the social norm that is communicated misrepresents the prevailing sentiments of the group." ²
- Senior officers may have relatively few interactions with junior officers in situations that afford a basis for inferring non-heterosexuality. This should be especially true when junior officers believe that operational effectiveness of the unit might be damaged by mentioning to a superior officer the inference or suspicion that another unit member is homosexual. Thus, when a unit that has a number of DADT-complying (i.e., closeted) and effectively functioning homosexual members, the conditions for occurrence of pluralistic ignorance seem near ideal, with the brunt of the ignorance most likely falling on officers with greatest command responsibility. More likely than not the unit's commander will believe in an alternate reality in which (a) the unit has few or no closeted homosexual personnel and (b) the

² The term pluralistic ignorance was introduced by social psychologists Daniel Katz and Floyd H. Allport in 1931 (Student Attitudes. Syracuse, N.Y.: Craftsman). The quote is from p. 244 of Prentice, D. A., & Miller, D. T. (1993). Pluralistic ignorance and alcohol use on campus: Some consequences of misperceiving the social norm. Journal of Personality and Social Psychology, 64, 243-256.

unit's effective functioning stands (illusorily) as confirmation that military units function best with no homosexual members.³

- 13. A theoretical explanation for a common phenomenon of over-assuming the extent of others' biases has developed in research on the effects of *implicit* attitudes and stereotypes.

³ As illustration, in her deposition, Colonel Janette Moore-Harbert (February 25, 2010, at p. 78) responded to the question, "Other than Major Witt have you had any experience encountering any other person in the military who was gay or lesbian?" by replying "Not that I can remember." At p. 79, in response to "At any point in your career has anyone in the Air Force or any other branch of the service come to you and say [sic] that they suspect that a person is gay or lesbian?" Colonel Moore-Harbert replied "I don't remember that happening."

⁴ The two quotes are, respectively, from p. 244 and p. 252 of Prentice and Miller, op. cit. supra.

⁵ The quote is from p. 91 of Bowen, A. M., & Bourgeois, M. J. (2001). Attitudes toward lesbian, gay and bisexual college students: The contribution of pluralistic ignorance, dynamic social impact and contact theories. *Journal of American College Health*, 50, 91–96.

An *implicit* anti-gay attitude is a form of attitude toward sexual orientation that operates largely outside of conscious awareness and is typically stronger than the corresponding explicit attitude. The corresponding *explicit* attitude is one for which its holder has conscious access; it is the anti-(or pro-) gay sentiment that one expects to be reported, barring deliberate misrepresentation, in response to survey questions that request a description of one's attitude.

- 14. Research has found that implicit anti-gay attitudes are most often stronger than the explicit ones held by the same person. This means that an anti-gay bias that operates outside of awareness is typically stronger than an anti-gay bias of which a person is aware. Two recent research studies, with a total of 1,603 respondents, revealed that implicit anti-gay bias is predictive of the extent to which one attributes anti-gay bias to others. To state this in other fashion, the assumption that others are more biased than oneself is a manifestation of implicit bias in effect, one assumes that others possess anti-gay attitudes of strength similar to one's own implicit bias, rather than of strength similar to the typically weaker anti-gay (or even progay) attitude represented by one's explicit attitude. Those familiar with psychoanalytic theory may recognize this interpretation as a parallel of what Sigmund Freud identified as an unconscious defense mechanism of *projection*.
- 15. Lastly, implicit anti-gay bias has been found to be stronger for respondents between 50 and 60 compared to those between age 40 and 50, and still stronger for those aged 60 and over.⁷

⁶ Nosek, B. A., & Hansen, J. J. (2008). The associations in our heads belong to us: Searching for attitudes and knowledge in implicit evaluation. *Cognition and Emotion*, 22, 553-594.

⁷ This result is reported in Table 5 of Error! Main Document Only.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. This article reports a very large Internet-conducted study in which 270,000 persons responded to (a) indirect measures of implicit attitudes and (b) self-report measures of explicit attitudes toward homosexuals. A caution in interpreting the results of this large study is that the respondents were volunteers who

- 16. The combined import of Points 1 and 2 is that senior commanders, such as Colonel Moore-Harbert, may be more likely than junior personnel to mistakenly assume that others have relatively strong anti-gay attitudes. The sources of information available to these senior leaders, biased by the operation of pluralistic ignorance, will lead them to substantially underestimate the past and present population of homosexual members in their unit (Point 1). At the same time, pluralistic ignorance, combined with operations of implicit attitudes and agerelated attitude differences, can lead senior commanders to severely overestimate the level of opposition to homosexuality among members of their unit (Point 2).
- impact of presence of a known homosexual in the unit. This conclusion follows from relatively recent studies of affective forecasting. The conclusion of such studies has been stated as follows: "People are generally unaware of the operation of the system of cognitive mechanisms that ameliorate their experience of negative affect . . . and thus they tend to overestimate the duration of their affective reactions to negative events." 9 Such overestimation of the duration of negative experiences explains how decision makers can assume that revelation of a homosexual's presence in their unit will produce not only an immediate undesired effect, but a durable undesired effect. Those who have investigated affective forecasting errors have theorized that the over-estimate of durability of negative impact is caused by common lack of understanding of

were not selected in a way that makes them representative either of the general American population or of the American military population. Nevertheless, the size of the sample and its great diversity in regard to sex, age, race, and geographic region oblige considering its results seriously.

⁸ Another illustration of this attitude in a senior officer is the recently published opinion ("Don't Ask, Don't Tell, Don't Change," New York Times, March 5, 2010).of former (1990–1994) Air Force Chief of Staff Merrill A. McPeak, who concluded his Op-Ed piece by writing, "I believe repealing 'don't ask, don't tell' will weaken the warrior culture at a time when we have a fight on our hands."

⁹ The quote is from p. 617 of Gilbert, D. T., Pinel, E. C., Wilson, T. D., Blumberg, S. J., & Wheatley, T. P. (1998). Immune neglect: A source of durability bias in affective forecasting. *Journal of Personality and Social Psychology*, 75, 617–638.

human mental resilience in the face of unexpected events. Demonstrations of this "durability bias" have compared predictions of the durability of impact of anticipated possible negative events with actual duration of negative impact reported by people who recently experienced those negative events. The types of events for which this was examined included the ending of a romantic relationship, the denial of academic tenure for university faculty members, and the defeat of one's preferred candidate in a state gubernatorial election. Applying this principle, even if the identification of a homosexual in a military unit does have some negative effects on members of the unit, that negative impact will likely dissipate considerably sooner than decision makers anticipate.

the situation of working with an announced homosexual in the unit, the decision maker is more likely than not to mispredict both own and other unit members' responses to knowledge that a unit member is homosexual. The phenomenon here can be labeled as role-playing error for reasons that will soon be apparent. This phenomenon has been described in widely different areas of social behavior over a period of 75 years. The first report, in 1934, described a study in which a researcher, together with a Chinese couple, traveled around the southwest United States by car, seeking accommodations at hotels, motels, and restaurants. The trio was accommodated in all but one of 251 attempts. Several months later, the researcher wrote to proprietors of all of the same 251 establishments, asking (among other questions) "Will you accept members of the Chinese race as guests in your establishment?" Over 90 percent responded "No". The obviously remarkable discrepancy was between proprietors' non-receptivity to Chinese guests in their

following their anticipated and actual durations of negative outcomes. This was possible by obtaining data from the same subjects on two occasions — the first was immediately after having voted on Election Day and the second was one month post-election.

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response to the mailed question, and the receptivity to the Chinese couple previously displayed by either those same proprietors or their colleagues or employees.¹¹

- varied settings, in which research subjects were asked to predict how they would behave in hypothetical situations that they had not previously encountered. Among these findings was one in 1963, showing that naïve respondents grossly underpredicted the likelihood that they would obey instructions to administer severe and possibly lethal electric shocks to another person who appeared to be a learner in an experimental study of punishment. A recent such study, in 2009, reported that subjects grossly overstated their likelihood of intervening by protesting in response to another person's anti-Black racial slur in a laboratory study. In these studies the direction of error is consistent people predict that they will behave in a normatively acceptable fashion (in 1934, it was normatively accepted to express prejudice against Chinese). By 40 years ago, the problem of erroneously predicting one's own behavior in hypothetical situations had been strongly enough established to lead a prominent social psychologist to write a well-cited article that advised researchers not to use such "role-playing" research methods in which research subjects were asked to describe their predicted behavior in hypothetical situations. If
- 20. The general point emerging from studies on the theme of role-playing error is that judgments of one's own behavior in hypothetical situations are likely to be erroneous. The consistent error, as noted in the preceding paragraph, is for subjects to predict that they will

¹¹ LaPiere, R. T. (1934). Attitudes versus actions. Social Forces, 13, 230-237.

¹² Milgram, S. (1963). Behavioral study of obedience. *Journal of Abnormal and Social Psychology*, 67, 371–378.

¹³ Kawakami, K., Dunn, E., Karmali, F., & Dovidio, J. F. (2009). Misreading affective and behavioral responses to racism. *Science*, 323, 276–278.

¹⁴ Freedman, J. L. (1969). Role playing: Psychology by consensus. *Journal of Personality and Social Psychology*, 13, 107-114.

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behave in a fashion that is normatively appropriate for the hypothetical situation. When it is normatively appropriate to object to the presence of homosexuals — as should be true in American military units in the era of DADT — decision makers should over-predict that they (and, by reasonable generalization, other members of their unit) will find the presence of a homosexual unit member objectionable and disruptive. However, this prediction is much more likely than not to be in error. One indication of this error is the extent to which members of the 446th Aeromedical Evacuation Unit accepted the presence of Major Witt, not only without objection, but with the belief that she was a materially positive contributor to the unit's cohesive functioning.

a. C. Creemveld

Anthony G. Greenwald March 17, 2010

Alphabetical List of Sources Which May Be Used as Exhibits

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List of Attachments

- 1. Curriculum Vitae of Anthony G. Greenwald
- 2. Consulting Fee Schedule
- 3. Previous Expert Testimony, Past 4 Years

VITA: ANTHONY G. GREENWALD

March 1, 2010

Present Position

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Education

B. A., Yale University, 1959, magna cum laude M. A., Harvard University, 1961 (Social Psychology) Ph.D., Harvard University, 1963 (Social Psychology)

Occupational History 1959-63 Re

1959–63	Research assistantships with Richard L. Solomon, Richard Alpert, Elliot Aronson, Walter Mischel (Harvard) and Frank Logan and Allan R. Wagner (Yale, Summer, 1960)			
1963–65	Teaching Fellow and Resident Tutor in Social Relations (Harvard, Leverett House) USPHS Postdoctoral Research Fellow, Educational Testing Service, Princeton, N. J.			
	(Personality Research Group)			
1965–67	7 Mershon Assistant Professor of Psychology, Ohio State University			
1967–71				
1971–86	Professor of Psychology, Ohio State University			
1978–79	Visiting Scholar, Stanford University (while on sabbatical leave)			
1986-	Professor of Psychology, University of Washington			
1992–93	Visiting Scholar, Yale University (while on sabbatical leave, Spring term)			
2004–05	Fellow of the Redcliffe Institute for Advanced Study (2004–2005)			

Special Fields

Social Cognition
Unconscious and Implicit Cognition
Attitudes
Research Methodology

Honors

Phi Beta Kappa, 1958 (Yale)
Scholar of the House, 1958–59 (Yale)
Woodrow Wilson Graduate Fellowship, 1959–60 (Harvard)
Woodrow Wilson Dissertation Year Fellowship, 1962–63 (Harvard)
National Research Service Award, 1978–79 (Stanford)
National Science Foundation Fellow, June 1987 (U. of Iowa)
Donald T. Campbell Award, Society of Personality and Social Psychology (1995)
Research Scientist Award, National Institutes of Health (1998–2004)
Elected Fellow, Society of Experimental Psychologists (1998)
Fellow of the Japanese Society for Promotion of Science (2001)
Thomas M. Ostrom Award, Person Memory Interest Group (2001)
Distinguished Scientist Award, Society of Experimental Social Psychology (2006)
Fellow, American Academy of Arts and Sciences (2007)



Memberships

American Psychological Association

APA Fellow in five Divisions: 1 (Society of General Psychology), 3 (Division of Experimental Psychology), 8 (Society of Personality and Social Psychology), 9 (Society for the Psychological Study of Social Issues), and 23 (Society of Consumer Psychology)

American Academy of Arts and Sciences (Fellow)

American Association for the Advancement of Science (Fellow)

Psychonomic Society

Society of Experimental Social Psychology (Fellow)

Chair, 1985-1986; Secretary-Treasurer, 1983-85; Executive Committee, 1983-86

Association for Psychological Science (Fellow)

Midwestern Psychological Association

Society of Experimental Psychologists (Fellow)

European Association of Experimental Social Psychology

Asian Association of Social Psychology

Society for the Psychological Study of Social Issues

Society of Personality and Social Psychology

Society of Consumer Psychology

Editorial and Review Duties

Member, NICHD Special Study Section on Population, 1969-71

Editorial Board, Journal of Experimental Social Psychology, 1970-1981

Editorial Board, Psychonomic Science, 1971-72

Editorial Board, Journal of Personality and Social Psychology, 1971-72

Editorial Board, Memory & Cognition, 1972-1997

Associate Editor, Journal of Personality and Social Psychology, 1972-76

Editor, Journal of Personality and Social Psychology, 1977-79

Editorial Board, Psychological Review, 1985-1990

Editorial Board, Journal of Experimental Psychology: General, 1990-1995, 2002-2006

Editorial Board, Journal of Personality and Social Psychology: Attitudes and Social Cognition, 1996-present

Editorial Board, Consciousness and Cognition, 1998-present

Editorial Board, Psychological Science, 1999-2007

Associate Editor, Experimental Psychology, 2001-2008

Editorial Board, Personality and Social Psychology Bulletin, 2002-2005

Editorial Board, Journal of Consumer Psychology, 2002-present

Editorial Board, Perspectives on Psychological Science, 2007-present

Books

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- Nosek, B. A., Smyth, F. L., Sriram, N., Lindner, N. M., Devos, T., Ayala, A., Bar-Anan, Y., Bergh, R., Cai, H., Gonsalkorale, K., Kesebir, S., Maliszewski, N., Neto, F., Olli, E., Park, J., Schnabel, K., Shiomura, K., Tulbure, B., Wiers, R. W., Somogyi, M., Akrami, N., Ekehammar, B., Vianello, M., Banaji, M. R., & Greenwald, A. G. (2009). National differences in gender-science stereotypes predict national sex differences in science and math achievement. *Proceedings of the National Academy of Sciences*, 106, 10593-10597.
- Andrews, J. A., Hampson, S. E., Greenwald, A. G., Gordon, J., & Widdop, C. (in press). Using the Implicit Association Test to assess children's implicit attitudes toward smoking. *Journal of Applied Social Psychology*.
- 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.
- Sriram, N., Greenwald, A. G., & Nosek, B. A. (in press). Correlational biases in mean response latency differences. *Statistical Methodology*.
- Cvencek, D., Meltzoff, A, N., & Greenwald, A. G. (2010, in press). Math-gender stereotypes in elementary-school children. *Child Development*.
- Greenwald, A. G. (2010, in press). Under what conditions does intergroup contact improve intergroup harmony? In M. H. Gonzales, C. Tavris, & J. Aronson (Eds.), The scientist and the humanist: A festschrift in honor of Elliot Aronson. New York: Psychology Press.
- Zayas, V., Greenwald, A. G., & Osterhout, L. (2010, in press). Unintentional covert motor activations predict behavioral effects: Multilevel modeling of trial-level electrophysiological motor activations. *Psychophysiology*.

Convention and Conference Papers Presented

- Greenwald, A. G. (1964, September). Behavior change mediated by change in belief: The role of experience prior to the influence attempt. American Psychological Association, Los Angeles.
- Greenwald, A. G. (1965, April). Punishment as a means of increasing the "strength" of a response. Eastern Psychological Association, Atlantic City.
- Greenwald, A. G. (1966, May). Task attractiveness as a function of incentive for performance. Midwestern Psychological Association, Chicago.
- Cullen, D. M., & Greenwald, A. G. (1967, May). The importance of recipient-generated messages in attitude change. Midwestern Psychological Association, Chicago.
- Greenwald, A. G. (1967, September). An amended learning model of persuasion. In Symposium on "Alternatives to consistency theory in the study of attitude change," American Psychological Association, Washington, D.C.
- Love, R. E., & Greenwald, A. G. (1970, May). Nonreactive, nonverbal measures of attitudinal responses to television editorials. Midwestern Psychological Association, Cincinnati.
- Greenwald, A. G. (1970, November). Evidence of both perceptual filtering and response suppression for rejected messages in selective attention. Psychonomic Society, San Antonio, Texas.
- Gillig, P. M., & Greenwald, A. G. (1971, May). A cognitive response analysis of the sleeper effect. Midwestern Psychological Association, Detroit.
- Greenwald, A. G., & Gillig, P. M. (1971, September). A cognitive response analysis of the sleeper effect. American Psychological Association, Washington, DC.
- Greenwald, A. G., & Shulman, H. G. (1972, May). Can the "psychological refractory period effect" in choice reaction time be eliminated? Midwestern Psychological Association, Cleveland.
- Greenwald, A. G. (1972, September). Inferences about ideomotor mechanisms from double stimulation research. In Symposium on "Information processing," American Psychological Association, Honolulu.
- Greenwald, A. G. (1972, November). Timesharing as a function of ideomotor compatibility: Further evidence. Psychonomic Society, St. Louis.
- Greenwald, A. G., Gross, A. E., & Ostrom, T. M. (1973, May). Influence of demand characteristics on post hoc reports of voting behavior. Midwestern Psychological Association, Chicago.
- Greenwald, A. G. (1973, October). Consequences of prejudice against the null hypothesis. Invited paper, Society of Experimental Social Psychology, lowa City.
- Ronis, D. L., & Greenwald, A. G. (1974, May). Primacy and recency in persuasion as a function of the timing of the opposed messages and the opinion measure. Midwestern Psychological Association, Chicago.
- Rosenberg, K. E., & Greenwald, A. G. (1975, May). Selective attention as a function of the cue relevance of the distracting stimuli. Midwestern Psychological Association, Chicago.
- Cacioppo, J. T., & Greenwald, A. G. (1976, May). The temporal course of opinion change following forewarning. Midwestern Psychological Association, Chicago.
- Greenwald, A. G., & Rosenberg, K. E. (1976, August). Sequential effects of distracting stimuli in a selective attention reaction time task. Invited paper, Seventh International Symposium on Attention and Performance, Senanque, France.
- Greenwald, A. G., & Rosenberg, K. E. (1976, November). On doing two things at once: III. The proper single-task control condition. Psychonomic Society, St. Louis.
- Baumgardner, M. H., Leippe, M. R., & Greenwald, A. G. (1977, May). Effects of topic characteristics on persistence of persuasion. Midwestern Psychological Association, Chicago.
- Greenwald, A. G. (1977, October). Twenty years of cognitive dissonance: Comments on the evolution of a theory. Invited paper, Society of Experimental Social Psychology, Austin, Texas.

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- Leippe, M. R., Baumgardner, M. H., & Greenwald, A. G. (1977, November). Associative interference and persistence of persuasion. Psychonomic Society, Washington, D.C.
- Greenwald, A. G. (1978, November). Concept of the totalitarian ego. Invited paper, Society of Experimental Social Psychology, Princeton, New Jersey.
- Greenwald, A. G. (1979, May). Environmental structure and cognitive structure. Invited paper, Conference on Cognition, Social Behavior, and the Environment, Vanderbilt University, Nashville, Tennessee.
- Greenwald, A. G. (1979, November). Timesharing, ideomotor compatibility, and automaticity. Invited paper, Human Factors Society, Boston.
- Greenwald, A. G., Leavitt, C., & Obermiller, C. (1980, September). What is low consumer involvement? In Symposium on "Perspectives on consumer involvement," American Psychological Association, Montreal.
- Leavitt, C., Greenwald, A. G., & Obermiller, C. (1980, October). What is low involvement low in? In Symposium on "Low involvement theory," Association for Consumer Research, Washington, D.C.
- Breckler, S. J., & Greenwald, A. G. (1981, May). Favorable self-referent judgments are made faster than nonfavorable ones. Midwestern Psychological Association, Detroit.
- Breckler, S. J., Banaji, M. R., Greenwald, A. G., & Pratkanis, A. R. (1981, August). An experimental analog of the self as a memory system. American Psychological Association, Los Angeles.
- Pratkanis, A. R., & Greenwald, A. G. (1981, August). Consumer involvement and persisting impact of brand evaluations. American Psychological Association, Los Angeles.
- Greenwald, A. G., Banaji, M. R., Pratkanis, A. R., & Breckler, S. J. (1981, November). A centrality effect in recall. Psychonomic Society, Philadelphia.
- Greenwald, A. G. Self and memory. (1982, January). Invited paper, Seventh Interdisciplinary Conference, Jackson Hole, Wyoming.
- Breckler, S. J., & Greenwald, A. G. (1982, April). Location of the self in multidimensional trait space. Eastern Psychological Association, Baltimore.
- Devine, P. G., & Greenwald, A. G. (1982, April). The self-generation component of imagery: Greater recall for own than others' images. Eastern Psychological Association, Baltimore.
- Pratkanis, A. R., & Greenwald, A. G. (1982, April). A reawakening of the sleeper effect in persuasion? Eastern Psychological Association, Baltimore.
- Greenwald, A. G., & Leavitt, C. (1982, June). The psychology of audience involvement. Invited paper, Conference on Consumer Involvement, New York University, New York.
- Banaji, M. R., & Greenwald, A. G. (1982, August). The second-generation effect: Support for an encoding centrality principle. American Psychological Association, Washington, D.C.
- Breckler, S. J., & Greenwald, A. G. (1982, August). Location of the self in multidimensional trait space. In Symposium on "Measurement and functioning of self-esteem," American Psychological Association, Washington, D.C.
- Kidd, G. R., & Greenwald, A. G. (1982, August). Attentional requirements for the establishment of memory for serial structure. American Psychological Association, Washington, D.C.
- Pratkanis, A. R., & Greenwald, A. G. (1982, August). Cognitive structure and the sleeper effect: A progress report. In Symposium on "Cognitive structure and attitude change," American Psychological Association, Washington, D.C.
- Greenwald, A. G., & Kidd, G. R. (1982, November). Can you learn a series of digits without attending to their order? Psychonomic Society, Minneapolis.
- Greenwald, A. G., & Leavitt, C. (1983, May). Cognitive theory and audience involvement. Presented at Second Conference on Advertising and Consumer Psychology, Chicago.

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- Pratkanis, A. R., & Greenwald, A. G. (1983, May). Toward a reliable sleeper effect in persuasion. Presented at Midwestern Psychological Association, Chicago.
- Pratkanis, A. R., & Greenwald, A. G. (1983, May). A reliable sleeper effect in persuasion: Implications for opinion change theory and research. Presented at Second Conference on Advertising and Consumer Psychology, Chicago.
- Banaji, M. R., & Greenwald, A. G. (1984, April). When does self-reference facilitate recall? Presented at Eastern Psychological Association, Baltimore.
- Banaji, M. R., & Greenwald, A. G. (1984, May). Self-generated information aids memory at retrieval. Presented at Midwestern Psychological Association, Chicago.
- Greenwald, A. G. (1984, July). Analysis of cognitive aspects of the self-concept. Presented at International Conference on Self and Identity, Cardiff, Wales.
- Greenwald, A. G. (1984, August). Totalitarian egos vs. totalitarian societies. Invited address presented at American Psychological Association, Toronto.
- Greenwald, A. G. (1984, August). Self-knowledge and self-deception. In Symposium on "Self-deception: Theoretical and empirical advances," American Psychological Association, Toronto.
- Banaji, M. R., Bellezza, F. S., & Greenwald, A. G. (1985, March). Are women more emotional?: Gender differences in reported emotional response do not translate to recall. Presented at Eastern Psychological Association, Boston.
- Greenwald, A. G., Bellezza, F. S., & Banaji, M. R. (1985, May). Individual differences in access to self-relevant knowledge. Presented at Midwestern Psychological Association, Chicago.
- Johnson, M. M. S., & Greenwald, A. G. (1985, May). Does the generation effect apply to stimuli as well as to responses? Presented at Midwestern Psychological Association, Chicago.
- Greenwald, A. G. (1985, June). Totalitarian egos in personalities of democratic leaders. Presented at Internation Society of Political Psychology, Washington, DC.
- Breckler, S. J., & Greenwald, A. G. (1985, August). Public, private, and collective facets of self-esteem. In Symposium on "Self-esteem maintenance: theory and evidence," American Psychological Association, Los Angeles.
- Greenwald, A. G., & Liu, T. J. (1985, November). Limited unconscious processing of meaning. Presented at Psychonomic Society, Boston.
- Greenwald, A. G. (1986, April). How shall the self's identity be conceived? In Symposium on "Integrative approaches to self, ego, and identity," University of Notre Dame, Notre Dame, Indiana.
- Breckler, S. J., Greenwald, A. G., & Wiggins, E. C. (1986, April). Public, private, and collective self-evaluation: Measurement of individual differences. Paper presented at invited international exchange (Poland-USA) conference on "Self and Social Involvement," Princeton, NJ.
- Carnot, C. G., Greenwald, A. G., Hartlage, S., & Varley, M. (1986, May). Increasing voting behavior by asking people if they expect to vote. Presented at Midwestern Psychological Association, Chicago.
- Johnson, M. M. S., & Greenwald, A. G. (1986, May). Liking for name letters: Mere exposure or ego attachment? Presented at Midwestern Psychological Association, Chicago.
- Lynn, A. R., & Greenwald, A. G. (1986, May). The mere exposure effect: An informative failure to replicate. Presented at Midwestern Psychological Association, Chicago.
- Greenwald, A. G. (1987, August). How shall the self be conceived? In Symposium on "Fifty years of personality psychology," American Psychological Association, New York City.
- Greenwald, A. G. (1987, October). What do we mean when we say "subliminal"? Invited paper, Society of Experimental Social Psychology, Charlottesville, Virginia.
- Klinger, M. R., & Greenwald, A. G. (1988, April). Priming of evaluative judgments by dichoptically masked words. Presented at Midwestern Psychological Association, Chicago.

- Vita: Anthony G. Greenwald Page 15
- Greenwald, A. G. (1988, June). Self-knowledge and self-deception. Presented at International Gulf-Bridging Conference on Defense Mechanisms, Self-Deception, and Cognitive Error, Nieborow, Poland.
- Greenwald, A. G., & Klinger, M. R. (1988, June). Unconscious processing of word meaning. Presented at International Gulf-Bridging Conference on Defense Mechanisms, Self-Deception, and Cognitive Error, Nieborow, Poland.
- Greenwald, A. G., & Klinger, M. R. (1988, November). Semantic analysis of dichoptically masked words. Paper presented at meetings of the Psychonomic Society, Chicago.
- Klinger, M. R., Greenwald, A. G., & Vande Kamp, M. E. (1989, May). Increasing voter turnout by vanity-assisted consciousness raising. Presented at Midwestern Psychological Association, Chicago.
- Vande Kamp, M. E., Kerr, K. L., & Greenwald, A. G. (1989, May). Is high self-esteem a precondition of "normal" behavior? Presented at Midwestern Psychological Association, Chicago.
- Klinger, M. R., & Greenwald, A. G. (1989, May). In search of reliable unconscious priming effects. Presented at Midwestern Psychological Association, Chicago.
- Greenwald, A. G., & Klinger, M. R. (1989, November). Further tests for unconscious processing of dichoptically masked words. Paper presented at meetings of the Psychonomic Society, Atlanta.
- Greenwald, A. G. (1989, November). What cognitive representations underlie social attitudes? Paper presented at meetings of the Psychonomic Society, Atlanta.
- Pratkanis, A. R., Eskenazi, J., & Greenwald, A. G. (1990, April). On the ineffectiveness of subliminal self-help audiotapes. Presented at Western Psychological Association, San Bernadino, CA.
- Majer, K., Vande Kamp, M. E., & Greenwald, A. G. (1990, May). Further research on limiting conditions of the mere exposure effect. Presented at Midwestern Psychological Association, Chicago.
- Greenwald, A. G., Spangenberg, E. R., & Klinger, M. R. (1990, August). Which subliminal effects should we worry about? In Symposium on "Subliminal Perception: Does it Have Practical Applications?" American Psychological Association, Boston.
- Greenwald, A. G. (1990, August). What cognitive representations underlie prejudice? Invited address, American Psychological Association, Boston.
- Greenwald, A. G. (1991, March). Implicit self-reference: Indirect measurement of self-cognition and self-esteem. Invited address at International Conference, "Cognition, Social Cognition, and the Question of the Self," Aix-en-Provence, France.
- Banaji, M. R., & Greenwald, A. G. (1991, June). Measuring implicit attitudes. In Symposium, "The Psychological Unconscious," American Psychological Society, Washington, DC.
- Banaji, M. R., & Greenwald, A. G. (1991, June). Implicit attitudes and unconscious prejudice. Invited presentation at Seventh Ontario Symposium on Personality and Social Psychology, "The Psychology of Prejudice," Waterloo, Ontario.
- Greenwald, A. G. (1991, October). Under what conditions should replication be required before publication. Invited presentation at Social Psychophysiology Group pre(SESP)-meeting, Columbus, OH.
- Greenwald, A. G. (1991, November). Subliminal semantic activation between objective and subjective thresholds. Paper presented at meetings of the Psychonomic Society, San Francisco, CA.
- Lowy, E., Word, S., & Greenwald, A. G. (1992, May). Placebo effects of subliminal self-help tapes. Presented at Midwestern Psychological Association, Chicago.
- Greenwald, A. G. (1992, August). Subliminal semantic activation and subliminal snake oil. In Symposium on "Subliminal Influence: For Better or for Nought?" American Psychological Association, Washington, DC.
- Greenwald, A. G. (1992, August). Unconscious cognition is real, but simpler than psychoanalysts believe. In Symposium on "Conscious and Unconscious Processes: Toward the Second Century," American Psychological Association, Washington, DC.



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- Greenwald, A. G., & Draine, S. C. (1993, April). Do subliminal stimuli enter the mind unnoticed? Tests with a new method. Paper presented at 25th Carnegie Symposium on Cognition, Pittsburgh, PA.
- Greenwald, A. G., & Draine, S. C. (1993, November). Do subliminal stimuli enter the mind unnoticed? Tests with a new method. Paper presented at meetings of the Psychonomic Society, Washington, DC.
- Gillmore, G. M., & Greenwald, A. G. (1994, April). The effects of course demands and grading leniency on student ratings of instruction. Paper presented at meetings of American Educational Research Association, Orlando, FL.
- Draine, S. C., & Greenwald, A. G. (1994, May). Dissociation of unconscious semantic activation from conscious cognition. Paper presented at meetings of the Midwestern Psychological Association, Chicago.
- Jost, J. T., Banaji, M. R., & Greenwald, A. G. (1994, July). Experiments on (Un)consciousness raising: Exploring the false fame bias in feminist samples. Paper presented at meetings of the America Psychological Society, Washington, DC.
- Walsh, W. A., Banaji, M. R., Hughes, R., & Greenwald, A. G. (1994, July). Race stereotyping in identification of criminals and politicians. Paper presented at meetings of the America Psychological Society, Washington, DC.
- Greenwald, A. G. (1994, October). Is it time to abandon the tripartite conception of attitude? Paper presented at meetings of the Society of Experimental Social Psychology, Reno, NV.
- Draine, S. C., & Greenwald, A. G. (1995, May). Response deadline increases masked evaluative priming. Paper presented at meetings of the Midwestern Psychological Association, Chicago.
- Greenwald, A. G., & Draine, S. C. (1995, July). Investigating cognition at the objective threshold: Method and results. In Symposium, "Unconscious Perception and the Objective Threshold," American Psychological Society, New York City.
- Walsh, W. A., Banaji, M. R., & Greenwald, A. G. (1995, July). A failure to eliminate race bias in judgments of criminals. Paper presented at meetings of the American Psychological Society, New York City.
- Greenwald, A. G. (August, 1995, August). Applying social psychology to reveal a major flaw in student evaluations of teaching. Invited Address at meetings of American Psychological Association, New York City.
- Abrams, R. L., Draine, S. C., & Greenwald, A. G. (1995, November). Temporal signature of subliminal semantic priming. Paper presented at meetings of the Psychonomic Society, Los Angeles, CA.
- Greenwald, A. G., & Draine, S. C. (1995, November). Empirically distinguishing conscious from unconscious cognition. In Symposium, "Relations Between Conscious and Unconscious Cognition," Psychonomic Society, Los Angeles, CA.
- Draine, S. C., & Greenwald, A. G. (1996, June). Unconscious processing of two-word negations: A "not bad" experiment. Paper presented at meetings of the American Psychological Society, San Francisco, CA.
- Glaser, J., Banaji, M. R, & Greenwald, A. G. (1996, July). Automatic prejudice: Evaluative priming of race categories. Paper presented at meetings of the American Psychological Society, San Francisco, CA.
- Schwartz, J. L. K., Greenwald, A. G., & Banaji, M. R. (1996, July). A novel approach to implicit attitude measurement: The implicit association task. Paper presented at meetings of the American Psychological Society, San Francisco, CA.
- McGhee, D. E., Greenwald, A. G., & Banaji, M. R. (1996, July). The implicit association task reveals unconscious racial stereotypes. Paper presented at meetings of the American Psychological Society, San Francisco, CA.
- Greenwald, A. G. (1996, October). Implicit self-esteem: The measure. Paper presented at the Self pre-conference meeting, Sturbridge, MA.

- Vita: Anthony G. Greenwald Page 17
- Rudman, L. A., Greenwald, A. G., & McGhee, D. E. (1996, October). Powerful women, warm men? The implicit associations among gender, potency, and nurturance. Paper presented at meetings of the Society for Experimental Social Psychology, Sturbridge, MA.
- Farnham, S. D., & Greenwald, A. G. (1997, April). Assessment of Implicit Self-Esteem Using the Implicit Association Test. Poster presented at meetings of the Western Psychological Association, Seattle, WA.
- Greenwald, A. G. (1997, April). A method for revealing implicit attitudes, prejudices, stereotypes, and self-esteem. Invited presentation at meetings of the Western Psychological Association, Seattle, WA.
- Greenwald, A. G., & Banaji, M. R. (1997, June). Implicit measurement reveals unconscious operation of prejudices and stereotypes. Invited presentation at firs annual conference of the Association for the Scientific Study of Consciousness ("What Does Implicit Cognition Tell Us about Consciousness?"), Claremont, CA.
- Greenwald, A. G., & Spangenberg, E. R. (1997, August). Self-prophecy and induced hypocrisy as methods for increasing political participation. Invited presentation at Conference on The Practice of Social Influence in Established and Emerging Democracies. Krakow, Poland.
- Greenwald, Anthony G. (1997, October). Using the Implicit Association Test to work toward a unified theory of social cognition. Paper presented at meetings of the Person Memory Interest Group, Kingston, Ontario, Canada.
- Banaji, M. R., Greenwald, A.G., & Rosier, M. (1997, October). Implicit esteem: When collectives shape individuals. Paper presented at the Preconference on Self, Toronto, Canada
- Greenwald, A. G, Banaji, M. R., Rudman, L. A., Farnham, S. D., Nosek, B. A., & Rosier, M. (1998, March). Prologue to a unified theory of attitudes, stereotypes, and self-concept. Presentation at International Symposium on Affect and Cognition, Sydney, Australia.
- Greenwald, A. G., & Abrams, R. L. (1998, April). Simple mental feats that require conscious cognition (because unconscious cognition can't do them). Plenary address to conference, "Toward a Science of Consciousness 1998 ('Tucson III')", Tucson, AZ.
- Nosek, B. A., Banaji, M. R., & Greenwald, A. G. (1998, April). Gender Differences in Implicit Attitude and Self-Concept toward Mathematics and Science. Paper presented at meetings of the Midwestern Psychological Association, Chicago.
- Mellott, D. S., & Greenwald, A. G. (1998, April). Do older adults show automatic ageism? Paper presented at meetings of the Midwestern Psychological Association, Chicago.
- Citrin, L. B., & Greenwald, A. G. (1998, April). Measuring Implicit Cognition: Psychologists' and Entomologists' Attitudes toward Insects. Paper presented at meetings of the Midwestern Psychological Association, Chicago.
- Greenwald, A. G., & Gillmore, G. M. (1998, April). The Positive Relationship between Course Grades and Course Ratings: What Is the Cause and What, If Anything, Should Be Done about It? Participation in debate moderated by W. J. McKeachie at meetings of the American Educational Research Association. San Diego, CA.
- Swanson, J. E., & Greenwald, A. G.(1998, May). Do Implicit Attitudes and Implicit Self-Concept Distinguish between Vegetarians and Omnivores? Validating the Implicit Association Test. Paper presented at meetings of the Midwestern Psychological Association, Chicago.
- Kim, D-Y., & Greenwald, A. G. (1998, May). Voluntary Controllability of Implicit Cognition: Can Implicit Attitudes Be Faked? Paper presented at meetings of the Midwestern Psychological Association, Chicago.
- Farnham, S. D., & Greenwald, A. G. (1998, May). Implicit Balance of Personal and Social Identity: I am good + I am Female = Female is Good. Paper presented at meetings of the Midwestern Psychological Association, Chicago.
- Rosier, M., Banaji, M. R., & Greenwald, A. G. (1998, May). Implicit and Explicit Self-Esteem and Group Membership. Paper presented at meetings of the Midwestern Psychological Association, Chicago.
- Nosek, B., Banaji, M. R., & Greenwald, A. G. (1998, May). Math = Bad + Male, Me = Good + Female, Therefore Math + Me. Paper presented at meetings of the American Psychological Society, Washington, DC.

- Vita: Anthony G. Greenwald Page 18
- Dasgupta, N., McGhee, D. E., Greenwald, A. G., & Banaji, M. R. (1998, May). The influence of stimulus frequency on implicit racial attitude. Paper presented at meetings of the American Psychological Society, Washington, DC.
- Greenwald, A. G. (1998, October). Theory and uses of the implicit association test. Paper presented at meetings of the Society of Experimental Social Psychology, Lexington, KY.
- Abrams, R. L., & Greenwald, A. G. (1998, November). When letters mean more than words: Unconscious cognition's limited analytic capability. Paper presented at meetings of the Psychonomic Society, Dallas, TX.
- Greenwald, A. G. (1998, December). Unconscious roots of prejudice and stereotyping. J. R. Nuttin Lecture, Leuven, Belgium.
- Banaji, M.R., Park, J., & Greenwald, A.G. (1999, April). Two mechanisms of social judgment: An application of signal detection theory to uncover the bases of stereotyping. Paper presented at meetings of the Eastern Psychological Association, Providence, RI.
- Dasgupta, N., & Greenwald, A.G. (1999, June). Exposure to admired group members reduces implicit prejudice. Paper presented at meetings of the American Psychological Society, Denver, CO.
- Farnham, S. D., & Greenwald, A. G. (1999, June). In-group favoritism = implicit self-esteem X in-group identification. Paper presented at meetings of the American Psychological Society, Denver, CO.
- Swanson, J. E., & Greenwald, A. G. (1999, June). I'm good + I smoke = smoking is good? Testing balance among cognitions. Paper presented at meetings of the American Psychological Society, Denver, CO.
- Mellott, D. S., & Greenwald, A. G. (1999, June). Measuring implicit ageism: Comparing the Implicit Association Test and priming methods. Paper presented at meetings of the American Psychological Society, Denver, CO.
- Brunel, F. F., Collins, C. M., Greenwald, A. G., & Tietje, B. C. (1999, October). Making the private public, accessing the inaccessible: Marketing applications of the Implicit Association Test. Paper presented at meetings of the Association for Consumer Research, Columbus, Ohio.
- Greenwald, A. G. (1999, October). Avoiding wasted effort on illusory competition among theories. Paper presented at meetings of the Society of Experimental Social Psychology, St. Louis, MO.
- Greenwald, A. G. (1999, October). Studying stigmatized identities using the Implicit Association Test. Paper presented at meetings of the Self Preconference, St. Louis, MO.
- Greenwald, A. G., & Abrams R. L. (1999, November). Dumb or smart? Subliminal perception of valence uses small pieces of words. Paper presented at meetings of the Psychonomic Society, Los Angeles, CA.
- Greenwald, R. G., & Abrams, R. L. (2000, February). Raindrop in a river: The paradox of ephemeral subliminal priming of evaluation. Paper presented at meetings of the Society of Personality and Social Psychology, Nashville, TN.
- Greenwald, R. G., & Abrams, R. L. (2000, April). Momentary decortication by visual masking: The paradox of ephemeral subliminal priming of evaluation. Paper presented at meetings of the Society of Experimental Psychologists, Santa Cruz, CA.
- Hummert, M. L., Garstka, T. A., Greenwald, A. G., Mellott, D. S., O'Brien, L., Lewis, L., Geiger, W., Mei-Chen, L., & Zhang, Y. B. (2000, April). Implicit associations, age stereotypes and identity. Paper presented at the Cognitive Aging Conference, Atlanta, GA.
- Mellott, D. S., & Greenwald, A. G. (2000, May). Measuring Implicit Ageism: Do the Implicit Association Test and Semantic Priming Measure the Same Construct? Paper presented at meetings of the Midwestern Psychological Association, Chicago, IL.
- Cook, K., Park, L., & Greenwald, A. G. (2000, June). Implicit associations and women's commitment to math, science, and engineering. Paper presented at meetings of the American Psychological Society, Miami Beach, FL.

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- Greenwald, A. G. (2000, October). Prejudiced, Who ME? Keynote address to annual meeting of Washington State Association for Multicultural Education, Seattle, WA.
- Banaji, M. R., & Greenwald, A. G. (2000, October). Point counterpoint: Evaluating the Implicit Association Test. Paper presented at meetings of the Person Memory Interest Group, Helen, GA.
- Abrams, R. L., & Klinger, M. R., & Greenwald, A. G. (2000, November). Learned mapping of stimuli to categories (not responses) revealed by subliminal semantic priming. Paper presented at meetings of the Psychonomic Society, New Orleans, LA.
- Greenwald, A. G. (2001, April). The resting parrot, the dessert stomach, and other perfectly defensible theories. Paper presented at conference, "The Yin and Yang of Progress in Social Cognition," New Haven, CT.
- Greenwald, A. G. (2001, May). Validity of the Implicit Association Test. Invited address at "Munich Encounters on Cognition and Action: Cognition and Action in Social Life," Munich, Germany.
- Greenwald, A. G., & Oakes, M. A. (2001, May). Targets of discrimination: The effect of race in a time-pressured criminal-identification task. Paper presented at "Special Interest Meeting on Affective Priming and Implicit Stereotyping," Lignely, Belgium.
- Greenwald, A. G. (2001, October). Nothing so practical as a good method. Invited address at meeting of the Person Memory Interest Group, Coeur d'Alene, ID.
- Greenwald, A. G. (2001, October). What's wrong with the IAT? Invited presentation at meeting of the Society of Experimental Social Psychology, Spokane, WA.
- Greenwald, A. G. (2002, April). Illusory competition between theories. Paper presented at annual meeting of the Society of Experimental Psychologists, Berkeley, CA.
- Greenwald, A. G., & Abrams. R. L. (2002, November). Visual masking reveals two qualitatively different levels of unconscious cognition. Presented at the 43rd Annual Meeting of the Psychonomic Society, Kansas City, MO.
- Chen, D. H., Greenwald, A. G., & Yamaguchi, S. (2003, June). Cross-Cultural Comparisons of Implicit and Explicit Self-Esteem. Presented at the 5th annual meeting of the NorthWest Cognition and Memory Conference, Seattle, WA.
- McCauley, J., & Greenwald, A. G. (2003, June). Exposure to Native-American mascots does not change implicit or explicit attitudes toward Native-Americans. Presented at the 5th annual meeting of the NorthWest Cognition and Memory Conference, Seattle, WA.
- Greenwald, A. G. (2003, September). Validity of the Implicit Association Test. Presented at the annual meeting of the Japanese Psychological Association, Tokyo.
- Dimofte, C., Yalch, R. F., & Greenwald, A. G. (2003, October). Brand Names as Sources and Targets of Tangential Implicit Associations. Presented at annual meeting of the Association for Consumer Research, Toronto, Canada.
- Maison, D., Greenwald, A. G., & Bruin, R. H. (2003, October). Implicit Consumer Ethnocentrism an Example of Dissociation between Explicit and Implicit Preference. Presented at annual meeting of the Association for Consumer Research, Toronto, Canada.
- Greenwald, A. G. (2003, September). Validity of the Implicit Association Test. Presented at the annual meeting of the Japanese Society of Social Psychology, Tokyo.
- Pinter, B., & Greenwald, A. G. (2004, January). Understanding implicit partisanship: Enigmatic (but genuine) group identification and attraction. Presented at the 5th annual meeting of the Society of Personality and Social Psychology, Austin, TX.
- Gibson, L.A., Banaji, M.R., Nosek, B.A., & Greenwald, A.G. (2004, January). The pervasive implicit association of "Weapons" with "Black Americans". Presented at the 5th annual meeting of the Society of Personality and Social Psychology, Austin, TX.
- Chen, D. H., Greenwald, A. G., & Yamaguchi, S. (2004, January). Higher implicit, lower implicit self-esteem in Japan than in North America: An effect of collectivistic culture? Presented at the 5th annual meeting of the Society of Personality and Social Psychology, Austin, TX.

- Vita: Anthony G. Greenwald Page 20
- Greenwald, A. G. (2004, January). Revised top ten list of things wrong with the IAT. Presented at the Attitudes Preconference, Austin, TX.
- McCauley, J., & Greenwald, A. G. (2004, January). Demographic correlations of implicit and explicit racial bias. Presented at the 5th annual meeting of the Society of Personality and Social Psychology.
- Greenwald, A. G. (2004, June). Implications of IAT findings for the definition of attitude. Presented at the EAESP Small Group Conference on Conscious and Unconscious Attitudinal Processes, Madrid.
- Greenwald, A. G., Gibson, L. A., Banaji, M. R., & Nosek, B. A. (2004, September). Pervasive implicit stereotypic association of weapons with blacks. Presented at the conference, Policing Racial Bias, Stanford, CA.
- Kawakami, K., Greenwald, A. G., Phills, C., Freed, G., & Mackenzie, J. (2005, January). Impact of social category activations on the self. Presented at the 6th annual meeting of the Society of Personality and Social Psychology, New Orleans, LA.
- Greenberg, A., & Greenwald, A. G. (2005, May). Visual Information Processing: A Priming Approach. Poster presented at the 7th annual meeting of Northwest Cognition and Memory, Bellingham, WA.
- Zayas, V., Osterhout, L., & Greenwald, A. G. (2005, May). Motor and semantic activation in masked priming: Evidence of response competition. Presented at the 7th annual meeting of Northwest Cognition and Memory, Bellingham, WA.
- Schnabel, K., & Greenwald, A. G. (2005, September). Schwache Frau = Schlechte Frau? Kontrolle unerwünschter Valenzeffekte bei der impliziten Diagnostik [Weak woman = bad woman? Control of unwanted valence effects in implicit diagnostics]. Poster presentation at the 8th meeting of the Personality Psychology and Psychological Assessment branch of the German Society of Psychology. Warburg, Germany.
- Sabin, J. A., Greenwald A. G., & Rivara F. P. (2005, December). Measuring health care provider implicit racial bias: Using the Implicit Association Test in health care research. Presented at the 133rd annual meeting of the American Public Health Association, Philadelphia, PA.
- Cvencek, D., & Greenwald, A. G. (2006, January). Identifying faking on the Implicit Association Test.

 Presented at the 7th annual meeting of the Society of Personality and Social Psychology, Palm Springs, CA.
- Ostafin, B. D., Greenwald, A. G., Stabbert, J. P., & Geerts, A. (2006, January). Improving the correlation between the IAT and alcohol use with Approach-Avoid attribute categories. Presented at the 7th annual meeting of the Society of Personality and Social Psychology, Palm Springs, CA.
- Sriram, N., & Greenwald, A. G. (2006, January). The Brief IAT: Setting salience asymmetry aside. Presented at the 7th annual meeting of the Society of Personality and Social Psychology, Palm Springs, CA.
- Pinter, B., & Greenwald, A. G. (2006, January). Developing an improved (and deception-free) minimal group induction procedure. Presented at the 7th annual meeting of the Society of Personality and Social Psychology, Palm Springs, CA.
- Lindgren, K.P., Shoda, Y., Greenwald, A.G., & George, W.H. (2006, January). Sexual or friendly? The nature of peoples automatic associations about men, women, and self. Presented at the 7th annual meeting of the Society of Personality and Social Psychology, Palm Springs, CA.
- Perkins, A. W., Forehand, M. R., Greenwald, A. G., & Pinter, B. (2006, January). Implicit attitudes produced as a result of associating self with neutral objects. Presented at the 7th annual meeting of the Society of Personality and Social Psychology, Palm Springs, CA.
- Cvencek, D., & Greenwald, A. G. (2006, May). Replicable unconscious valence and gender priming with word fragments. Presented at the 8th annual meeting of Northwest Cognition and Memory, Vancouver, BC, Canada.
- Greenwald, A. G. (2006, June). Catching consciousness unaware: Using *modus tollens* to establish what conscious cognition does. Invited keynote address to 10th annual meeting of the Association for the Scientific Study of Consciousness. Oxford, UK.
- Perkins, A. W., Forehand, M. R., Greenwald, A. G., & Pinter, B. (2006, September), "Ladies and gentlemen, lend me your attitudes": Implicit attitudes produced as a result of endorsement by mere group association". Paper presented at the 2006 annual meeting of the Association of Consumer Research, Orlando, FL.

- Vita: Anthony G. Greenwald Page 21
- Cvencek, D., & Greenwald, A. G. (2006, November). Faking of the Implicit Association Test is (a) difficult and (b) detectable. Presented at the 47th Annual Meeting of the Psychonomic Society, Houston, Tx.
- Greenwald, A. G., & Cvencek, D.(2006, November). Is The Analysis Of Two-Word Strings The Simplest Achievement Of Conscious Cognition? Presented at the 47th Annual Meeting of the Psychonomic Society, Houston, TX.
- Lindgren, K. P., Greenwald, A. G., Shoda, Y., & George, W. H. (2006, November). The use of implicit measures to investigate sexual perceptions. Presented at the 40th Annual Meeting of the Association for Behavioral and Cognitive Therapies. Chicago, IL.
- Greenwald, A. G. (2007, February). Validity of the Implicit Association Test. Presented at the Meeting of the Society of Consumer Psychology, Las Vegas, NV.
- Greenwald, A. G., (2007, April). Using knockout strategies to reveal conscious function. Presented at conference, "New Frontiers in Studies of Nonconscious Processing", Banbury Center, Cold Spring Harbor, New York.
- Greenwald, A. G. (2007, May). Knocking out conscious visual perception to discover what it's needed for. Invited address to 79th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Greenwald, A. G. (2007, May). Assessing the validity of IAT measures. Invited Psi Chi Address at the 19th annual meeting of the Association for Psychological Science, Washington, DC.
- Greenwald, A. G. (2007, May). The influence of grades on teaching effectiveness ratings. Invited Psi Chi workshop at the 19th annual meeting of the Association for Psychological Science, Washington, DC.
- Baillie, D. A., Bernstein, D. M., & Greenwald, A. G. (2007, May). The Food IAT: Examining food preference within the context of implicit association. Presented at the 9th annual meeting of Northwest Cognition and Memory, Vancouver, BC, Canada.
- O'Connor, R. M., Stewart, S. H., & Greenwald, A. G. (2007, June). Measuring implicit cognitions in clinical and social sciences research: A review of the literature. Presented at the symposium, "Cognitive Psychology in the real world: A symposium of reviews" (Chair: Raymond Klein) at the 17th Annual Meeting of the Canadian Society for Brain, Behaviour and Cognitive Science, Victoria, BC.
- Poehlman, T. A., Uhlmann, E., Greenwald, A. G., & Banaji, M. R. (2007, August). Predictive validity of the Implicit Association Test. Presented in Symposium, "Automatic Social Cognition and Organizational Behavior" at the annual meeting of the Academy of Management, Philadelphia, PA.
- Leavitt, K. M., Fong, C., & Greenwald, A. G. (2007, August). Revisiting the satisfaction/performance linkage: Implicit core-job attitudes and performance. Presented in Symposium, "Automatic Social Cognition and Organizational Behavior" at the annual meeting of the Academy of Management, Philadelphia, PA.
- Greenwald, A. G. (Organizer). (2007, August). Symposium "Launching Diversity Science". Presented at 115th annual convention of the American Psychological Association, San Francisco, CA.
- Lindgren, K. P., Greenwald, A. G., George, W. H., Shoda, Y., & Larimer, M. E. (2007, November). Implicit alcohol motives and their relation to heavy episodic drinking and alcohol expectancies. In K. P. Lindgren & R. M. O'Connor (Co-chairs), Experimental Methods and the Study of Addictive Behaviors. Symposium at the 41st Annual Meeting of the Association for Behavioral and Cognitive Therapies, Philadelphia, PA
- Greenwald, A. G. (2007, November). The new unconscious: Finding out what's inside our heads. Invited talk to Society of Sensible Explanations, Seattle, WA.
- Greenwald, A. G. (2007, November). Implicit bias and stereotypes: Finding out what's inside our heads. Invited talk to Dean's Circle (invited by Dean of Arts & Sciences), University of Washington.
- Contreras, R., Lane, J., Dondi, L.W., & Greenwald, A.G. (2008, February). Implicit Race Attitudes and Stereotypes in Municipal Court System Attorneys. Poster session presented at the pre-conference: Group Processes and Intergroup Relations of the national conference of the Society for Personality and Social Psychology, Albuquerque, NM.
- Greenwald, A. G. (2008, March). "The Psychology of Blink". Invited Edwards Lecture, University of Washington, Seattle.

- Sabin, J. A., Nosek, B. A., Greenwald, A. G., & Rivara, F. P. (2008, October). Comparing physician implicit and explicit attitudes about race by MD gender, race and ethnicity. Paper presented at the 136th Annual Meeting of the American Public Health Association. San Diego, CA.
- Sheets, P., Domke, D., & Greenwald, A. G. (2008, October). Barack Obama and American national identity: The implicit effects of living the American dream. Paper presented at The Obama Effect conference, University of Minnesota School of Journalism & Mass Communication, Mpls., MN.
- Terry, C. M., Kohlenberg, R. J., & Greenwald, A. G. (2008, November). A new measure to assess therapist preference to use in-vivo interventions. Presentation as part of the symposium Functional Analytic Psychotherapy: Theory and recent experimental findings. Symposium conducted at the 42nd annual convention of Association of Cognitive and Behavioral Therapies.
- Angle, J. W., Forehand, M. R., & Greenwald, A. G. (2009, February). Assessing the social implications of Native American sports team mascots. Presented at the 10th annual meeting of the Society of Personality and Social Psychology, Tampa, FL.
- Contreras, R. & Greenwald, A.G. (2009, February), "Preparing the Brief Implicit Association Test for Use in Efficient and Artifact-Free Research". Poster session presented at the national conference of the Society for Personality and Social Psychology, Tampa, FL.
- Dondi, L.W., & Greenwald, A.G. (2009, February). Assessing the Reliability and Construct Validity of the Brief Implicit Association Test. Poster presented at the annual meeting of the Society for Personality and Social Psychology, Tampa, FL.
- Albertson, B. L., & A. G. Greenwald. (2009, February). Pre-election polling and the 2008 Election. Presented at Race in American Politics: A 2008 Presidential Election Symposium. University of Washington, Seattle, WA.
- Cvencek, D., Meltzoff, A. N., & Greenwald, A. G. (2009, February). Math-gender stereotypes in elementary school children. Poster presented at the annual conference of the inter-Science of Learning Centers, Seattle, WA.
- Cvencek, D., Meltzoff, A. N., & Greenwald, A. G. (2009, April). Gender stereotypes obstruct incorporation of mathematics into young girls' self-concepts. Poster presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.
- Greenwald, A. G. (2009, May). Unconscious classical conditioning? Paper presented at annual meeting of the Society of Experimental Psychologists, Berkeley, CA.
- Cvencek, D., Meltzoff, A. N., & Greenwald, A. G. (2009, August). Girls and math: Stereotypes and math self-concepts in young children. Poster presented at the annual convention of the American Psychological Association, Toronto, ON.

Unpublished Manuscripts

- Greenwald, A. G. (1959). Aggressive behavior: A functional classification and a cross-cultural study. Undergraduate thesis in Scholars of the House Program, Yale University.
- Greenwald, A. G. (1963). Value change and its effects on behavior. Ph.D. dissertation, Harvard University, Department of Social Relations.
- Greenwald, A. G. (1964). Behavior change mediated by change in belief. Educational Testing Service Research Bulletin 64-28, Princeton, NJ.
- Greenwald, A. G. (1964). Skill and motivation as separable components of performance. *Educational Testing Service Research Bulletin 64-47*, Princeton, NJ.
- Greenwald, A. G. (1964). Information versus reward as the active ingredient of reinforcement in he acquisition of skilled performance. Educational Testing Service Research Bulletin 64-48, Princeton, NJ.
- Greenwald, A. G. (1964). Behavior change mediated by change of belief: The role of commitment prior to the influence attempt. Educational Testing Service Research Bulletin 64-50, Princeton, NJ.
- Greenwald, A. G. (1964). Learning theory: Some revised basic laws and concepts of performance, reward, and punishment. *Educational Testing Service Research Bulletin 64-58*, Princeton, NJ.
- Greenwald, A. G. (1965). Formal statement of a new approach to learning theory. Educational Testing Service Research Memorandum 65-7, Princeton, NJ.
- Greenwald, A. G. (1965). Punishment as a means of increasing the "strength" of a response. Educational Testing Service Research Memorandum 65-8, Princeton, NJ.
- Greenwald, A. G. (1988). Levels of representation. University of Washington.
- Greenwald, A. G., Klinger, M. R., Vande Kamp, M. E., & Kerr, K. L. (1988). The self-prophecy effect: Increasing voter turnout by vanity-assisted consciousness raising. University of Washington.

PhDs Supervised

Richard L. Abrams, Stuart M. Albert, Mahzarin R. Banaji, Michael H. Baumgardner, Steven J. Breckler, John T. Cacioppo, Dallas M. Cullen, Dario Cvencek, Sean C. Draine, Paulette M. Gillig, Mitzi M. S. Johnson, Mark R. Klinger, Michael R. Leippe, Robert E. Love, Dorothy Markiewicz, Deborah S. Mellott, Anthony R. Pratkanis, David L. Ronis, Jane E. Swanson, Mark E. VandeKamp, Gary L. Wells

Postdocs Supervised

Richard L. Abrams, Dario Cvencek, Huajian Cai, Geoffrey L. Cohen, Nilanjana Dasgupta, Alexander Genov, Elizabeth L. Haines, Renata Kodilja, Kristen Lindgren, Thomas J. Liu, Dominika Maison, N. Sriram, Roisin M. O'Connor, Brian D. Ostafin, Brad Pinter, Laurie A. Rudman, Janice A. Sabin, Konrad Schnabel, Eric Uhlmann, Vivian Zayas



Research Grants (AGG is Principal Investigator on all of these)

Dates	Title of Award	Sponsoring Agency	Grant No.	Amount
1965-66	The Role of Punishment in Human Learning Ohio State U. Office of Research			\$2,600
1966-69	Propaganda Effectiveness: An Analysis in Terms of Learning	Mershon Center for Education in National Security, Ohio State U.		\$29,663
1966-67	Response Selection and Sensory Feedback	National Institute of Mental Health	MH-13372	\$4,200
1967-70	Effectiveness of Persuasive Messages	National Science Foundation	GS-1601	\$39,900
1970-72	Initial Opinion and Response to Persuasion	National Science Foundation	GS-3050	\$45,400
1971-74	Mechanisms of Voluntary Action and Voluntary Attention	National Institute of Mental Health	MH-20527	\$55,222
1974-76	Mechanisms of Voluntary Action and Voluntary Attention National Institute of Mental Health		MH-20527	\$62,927
1974-75	Research in Persuasive Communication National Science Foundation		GS-42981	\$45,900
1976-78	Research in Persuasive Communication	National Science Foundation	BNS-7611175	\$64,200
1978-81	Attention and Preparation in Rapid Performance	National Institute of Mental Health	MH-31762	\$90,237
1978-81	Research in Persuasive Communication	National Institute of Mental Health	MH-32317	\$93,314
1983-85	Research in Persuasive Communication	National Science Foundation	BNS-8217006	\$72,698
1988-91	Research in Persuasive Communication: Subliminal Processes	National Institute of Mental Health	MH-41328	\$95,120
1992-94	Implicit Attitudes, Implicit Stereotypes, and Prejudice	National Science Foundation	DBC-9205890	\$52,545
1995-97	Implicit Attitudes, Implicit Stereotypes, and Prejudice	National Science Foundation	SBR-9422242	\$100,000
1992-97	Research in Persuasive Communication: Subliminal Processes	National Institute of Mental Health	MH-41328	\$324,193
1997-04	Investigations of Unconscious and Implicit National Institute of Mental Health M Cognition		MH-41328	\$483,406
1997-99	Implicit Social Cognition	icit Social Cognition National Science Foundation SBR-		\$115,000
1998-04	Implicit and Unconscious Cognition National Institute of Mental Health		MH-01533	\$490,050
1999-05	Implicit Social Cognition National Institute of Mental Hea		MH-57672	\$568,086



PhDs supervised

Year	Name	Dissertation Title	Employment
1968	Stuart M. Albert	A Cognitive Response Analysis of Counterattitudinal Role Playing	University of Minnesota, School of Management
1968	Dallas M. Cullen	Attitude Measurement by Cognitive Sampling	University of Alberta, Edmonton, Coll. of Business
1972	Robert E. Love	Failure of Inadvertent Nonverbal Behaviors to Reflect Attitudes Toward Communications	American University
1972	Dorothy Markiewicz	The Effects of Humor on Persuasion	Concordia University, Montreal
1973	Paulette M. Gillig	Evaluation Apprehension and its Effect on Responses to Counterattitudinal Information	Wright State University, School of Medicine
1977	John T. Cacioppo	Heart Rate, Cognitive Response, and Persuasion	University of Chicago
1977	David L. Ronis	Does the Relative Impact of the Better Rehearsed of Two Opposed Messages Increase Over Time?	University of Michigan, Institute for Social Research
1977	Gary L. Wells	Social and Self Perceptions of Attitudes as a Functions of Relevancy Information	Iowa State University
1978	Michael H. Baumgardner	Associative Learning Theory and Decay of Persuasion	President, Burke Marketing Services, Cincinnati
1979	Michael R. Leippe	Message exposure duration and attitude change: An information processing analysis of persuasion	St. Louis University
1983	Steven J. Breckler	Structural Equation Models of the Affective, Behavioral, and Cognitive Components of Attitude	National Science Foundation, Social Psychology Program
1984	Anthony R. Pratkanis	Attitudes and Memory: The Heuristic and Schematic Functions of Attitudes	University of California, Santa Cruz
1986	Mahzarin R. Banaji	Affect and Memory: An Experimental Investigation	Harvard University
1986	Mitzi M. S. Johnson	The Initial Letter Effect: Ego-Attachment or Mere Exposure?	University of Kentucky, Medical School
1991	Mark R. Klinger	Conscious and Unconscious Processes in the Mere Exposure Effect	University of Alabama
1997	Sean C. Draine	Analytic Limitations of Unconscious Language Processing	Microsoft Corporation
1999	Shelly D. Farnham	From Implicit Self-esteem to In-group Favoritism	Microsoft Corporation
2000	Richard L. Abrams	Unconscious Analysis of Nonadjacent Letters in Four- and Five- Letter Words	University of Washington
2001	Jane E. Swanson	Investigating Implicit and Explicit Cognitions Associated with Smoking	Dept. of Forest Resources, University of Washington
2002	Mark E. Vande Kamp	Auditory Implicit Association Tests	Dept. of Forest Resources, University of Washington
2003	Deborah S. Mellott	Measuring Implicit Attitudes and Stereotypes: Increasing Internal Consistency Reveals the Convergent Validity of IAT and Priming Measures	
2007	Dario Cvencek	Cognitive Balance Among Gender Identity, Gender Stereotypes and Identification with Math in Children	Institute of Learning and Brain Sciences, University of Washington



Anthony G. Greenwald, PhD 624-34th Avenue East Seattle, WA 98112

Consulting Fee Schedule, May 2008

Reading case background documents: \$300 / hour

Data analysis: \$350 / hour

Report writing, consultation: \$450 / hour

Deposition & testimony: \$500 / hour

Travel time unusable for other work: \$150 / hour

Anthony G. Greenwald STATEMENT OF PRIOR TESTIMONY March 2, 2010

Testimony as expert witness:

1. BOB BOGLE vs. GENERAL MOTORS CORPORATION; UNITED STATES DISTRICT COURT, WESTERN DISTRICT OF WASHINGTON, NO. C98- I236C.

Depositions and expert reports:

- 2. MUHAMMAD SHABAZZ FARRAKHAN et al. vs. CHRISTINE O. GREGOIRE, et. al.; UNITED STATES DISTRICT COURT, EASTERN DISTRICT OF WASHINGTON, NO: CV-96-076-RHW.
- 3. DERRICK SATCHELL, et al., Plaintiffs, vs. FEDEX EXPRESS, Defendants. No. C 03-2659 SI; C 03-2878 SI UNITED STATES DISTRICT COURT, NORTHERN DISTRICT OF CALIFORNIA
- 4. EMPLOYEES COMMITTED FOR JUSTICE, GLADYS ALSTON, COURTNEY DAVIS, CYNTHIA GAYDEN, ROBERT GIBSON, JANNIE NESMITH, NORALEAN PRINGLE, CARRIE RICE, MARIA SCOTT, OLIN SINGLETARY and EDNA WILLIAMS, et al., Plaintiffs, vs. EASTMAN KODAK COMPANY, Defendant. CIVIL ACTION NO.: 6:04-CV-06098.

 UNITED STATES DISTRICT COURT, WESTERN DISTRICT OF NEW YORK.

Cases in progress:

- 5. LINDA PIPPEN, et. al, Plaintiffs, vs. THE STATE OF IOWA, et. al, Defendants, Case No. CL 107038
- 6. GRACE ZUBIA-AISENBERG, Plaintiff, vs. BELLEVUE SCHOOL DISTRICT NO. 405, and LARA LYONS, Defendants, NO. 08-2-37077-1 SEA

Addendum to Expert Report of March 17, 2010

Anthony G. Greenwald

- 1. Points 3 and Point 4 of my report of March 17, 2010 were these:
- **Point 3**. The decision maker is more likely than not to overestimate damaging impact of presence of a known homosexual in the unit.
- **Point 4**. For the case in which the decision maker has not previously experienced the situation of working with an announced homosexual in the unit, the decision maker is more likely than not to mispredict both own and other unit members' responses to knowledge that a unit member is homosexual.
- 2. In deposition questioning (May 21, 2010), defendants' attorney Diederich asked me how one could estimate the *actual* (rather than possibly incorrectly anticipated) effects on cohesion and work effectiveness of discovering that a coworker is homosexual. That question bears on both my conclusions that decision makers will likely both overestimate damaging impact of presence of a homosexual (Point 3) and mispredict own and others' responses to presence of a homosexual (Point 4). To determine what existed in the way of a scientifically established answer to that question, I located three relevant reports, all of which were published in peer-reviewed journals. The remainder of this addendum provides the citations and abstracts of those three reports, accompanied by explanation of their relevance to my Points 3 and 4.
- 3. Report #1: Smith, S. J., Axelton, A. M., & Saucier, D. A. (2009). The effects of contact on sexual prejudice: A meta-analysis. Sex Roles, 61, 178–191.

¹ As an example, Attorney Diedrich asked a question about the chancellor of a hypothetical elite university that had never hired faculty other than ones trained at Ivy League institutions. He asked how this chancellor might be persuaded that faculty members trained at state universities could possibly function effectively at the hypothetical elite university (Greenwald deposition of May 21, 2010 at 60–63).

Published abstract. A meta-analysis was conducted to examine the relationship between contact and sexual prejudice. A quantitative synthesis with 83 effect sizes from 41 articles, using mostly samples from the United States, showed a significant negative relationship between contact and sexual prejudice. Among six possible moderators tested (type of sexual prejudice scale used, correlational versus experimental studies, attitudes toward lesbians versus gay men, publication year, quality of study, and where study was conducted), three were shown to significantly moderate the relationship between contact and sexual prejudice. The relationship between contact and sexual prejudice varied as a function of the type of sexual prejudice measure used, the target group toward which the prejudicial attitudes were assessed, and where the study was conducted.

- 4. The finding of "a significant negative relationship between contact and sexual prejudice" (quote from above abstract) means that more extensive interaction with lesbians and gay men was associated with *reduced* prejudice. Alternatively, this result can be stated as the finding that heterosexuals' attitudes toward gays and lesbians were more favorable when they had more interaction ("contact") with gay men or lesbians.
- 5. The 41 articles (with 83 separate studies) included data from 10,180 heterosexual persons ("subjects") who varied in whether or not they had contact with gays or lesbians. "Moderators" (see abstract) are conditions that varied across the studies and for which effects on attitudes toward gays and lesbians could be estimated by the article's meta-analysis method. Three of the six moderators that were evaluated are relevant to my Points 3 and 4.
- 6. *Moderator: Correlational versus experimental studies.* The meta-analysis found no statistically significant difference in effects of contact on attitudes between correlational and experimental studies. *Both* types of studies showed that more favorable attitudes towards gays

and lesbians were associated with more contact. The study's authors expected that the impact of contact might be greater in correlational studies because contact in those studies would often have been contact that was voluntarily initiated by the subject. The fact that there was a slightly larger effect for experimental studies (effect size = .26; n=12) than for correlational studies (effect size = .25; n=71) indicated that not-voluntarily initiated contact improved attitudes toward gays and lesbians just as much as did voluntarily initiated contact. Not-voluntarily initiated contact is especially relevant to the situation of a military unit in which unit members are obliged to interact with homosexuals whom they have not voluntarily sought out for interaction, and thus relevant to the situation of Major Witt.

- 7. Moderator: Target group (gay men versus lesbians). The researchers divided studies into those that examined contact specifically with lesbians (n=21 studies), with gay men (n=21), or with homosexuals of either sex (n=41). Although contact produced significant increases in liking in all three cases, the effect was statistically significantly greater in studies that focused on lesbians (effect size = .30) than in those that focused on gay men (effect size = .27) or homosexuals in general (effect size = .22). Therefore: The conclusions of this study apply to the situation of a lesbian such as Major Witt.
- 8. *Moderator: Location of study (US vs. non-US)*. The researchers grouped studies in terms of whether the study was conducted in the United States (36 of 41 articles) or outside the United States (6 of 41 articles). Although contact produced significant increases in liking for both groups of studies, the effect was modestly greater for studies done *in* the United States (effect size = .26) than for those done outside the United States (effect size = .23). Therefore: The conclusions of this study apply to the situation of homosexuals in the United States, including Major Witt.

9. Report #2: Herek, G. M., & Capitanio, J. P. (1996). "Some of my best friends": Intergroup contact, concealable stigma, and heterosexuals' attitudes toward gay men and lesbians. *Personality and Social Psychology Bulletin*, 22(4), 412–424.

Published abstract. Investigated the influence of contact with homosexuals on heterosexuals' attitudes toward homosexuality. 538 subjects indicated their attitudes toward gay men at Wave 1, and 383 subjects toward both gay men and lesbians approximately 1 yr later at Wave 2. Subjects were 18–65+ yrs old. At Wave 1, heterosexuals reporting interpersonal contact manifested more positive attitudes toward gay men than those without contact. Their attitudes were more favorable to the extent that they reported more relationships, closer relationships, and receiving direct disclosure about another's homosexuality. At Wave 2, these findings were generally replicated for attitudes toward lesbians as well as gay men.

- 10. The results from Wave 1 of this study showed greater liking of gay men by heterosexual males and females who had interactions with gay men. Because these results are correlational they are not necessarily relevant to a situation in which contact is the result of unsought interactions (which might be the circumstance in a military unit). The relationship between contact and positive attitudes could have been due to pre-existing favorable attitudes of respondents who had interactions with gay men.
- 11. The results from Wave 2 extended the finding of association of contact with homosexuals to favorable attitudes toward gays to lesbians. The survey design allowed some assessment of the effect on attitudes of contacts occurring between Wave 1 and Wave 2. Unfortunately, there were too few of these (only 26 respondents reported such contacts) and the reported contacts were generally not close contacts. For these 26 respondents, there was no

statistically detectable change in favorableness toward gays from Wave 1 to Wave 2. Although there was no evidence that these contacts improved attitudes toward gays or lesbians, there was equally no evidence that these contacts led to deterioration of attitudes.

- 12. Overall, the data from Waves 1 and 2 established that attitudes toward gays were more favorable for those who had interactions with more than one gay person and for those whose interactions were with persons who disclosed their gay status to the respondent. These findings are consistent with the hypothesis that favorable attitudes were produced by these interactions. However, the correlational design of the study prevents a strong inference of that type. At the same time, the survey's results were entirely *in*consistent with any conclusion that interactions with gays who have disclosed their homosexuality damages relationships.
- 13. **Report #3**: Moradi, B. & Miller, L. (2010). Attitudes of Iraq and Afghanistan war veterans toward gay and lesbian service members. *Armed Forces & Society*, 36, 397–419.

Published abstract. U.S. policy banning openly gay and lesbian personnel from serving in its military rests on the belief that heterosexual discomfort with lesbian and gay service members in an integrated environment would degrade unit cohesion and readiness. To inform this policy, data from a 2006 survey of Iraq and Afghanistan war veterans are analyzed in this study. Views of these war veterans are consistent with prior surveys of military personnel showing declining support for the policy: from about 75 percent in 1993 to 40 percent in this survey. Among the demographic and military experience variables analyzed, comfort level with lesbian and gay people was the strongest correlate of attitudes toward the ban. War veterans indicated that the strongest argument against the ban is that sexual orientation is unrelated to job performance and that the strongest argument in favor of the ban is a projected negative impact on unit cohesion. However,

analyses of these war veterans' ratings of unit cohesion and readiness revealed that knowing a gay or lesbian unit member is not uniquely associated with cohesion or readiness; instead, the quality of leaders, the quality of equipment, and the quality of training are the critical factors associated with unit cohesion and readiness.

- 14. This study was based on a survey conducted by the polling organization, Zogby International.² Zogby's study used a sample that was described as a "voluntary online poll of 545 U.S. service members who had served in the Iraq or Afghanistan theaters of operations since 2001." The article reporting the survey's results was authored by a professor of psychology at University of Florida (Moradi) and a sociologist employed by RAND Corporation in Arlington, VA (Miller).
- 15. The pattern documented in this study, of historically declining support for DADT (between 1993 and 2006) among war veterans, is consistent with the conclusion that presence of homosexual members in military units does not damage morale. But it does not demand that conclusion. More relevant to my Points 3 and 4 is the finding summarized in the last two sentences of the article's abstract: "... analyses of these war veterans' ratings of unit cohesion and readiness revealed that knowing a gay or lesbian unit member is not uniquely associated with cohesion or readiness; instead, the quality of leaders, the quality of equipment, and the quality of training are the critical factors associated with unit cohesion and readiness." The statistical evidence supporting this conclusion was a finding of essentially zero relation between respondents' knowledge that their unit had a gay or lesbian member (response to "Do you know for certain that someone is gay or lesbian in your unit?") and judgments either of the unit's

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² John Zogby, John Bruce, Rebecca Whittman, and Sam Rodgers, *Opinions of Military Personnel on Sexual Minorities in the Military* (New York: Zogby International, December 2006).

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cohesion ("There is a lot of teamwork and cooperation in my unit") or the unit's readiness ("How would you rate the readiness of your unit for its wartime mission?").

16. In overall conclusion, the results of these three studies reinforce the conclusions drawn in Points 3 and 4 of my report dated March 17, 2010.

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