

Reading List on Evaluation Bias in the Workplace

1. What is the nature of the problem?—General analysis

*Fiske, S. T. (2002). What we know about bias and intergroup conflict, the problem of the century.

Current Directions in Psychological Science 11(4): 123-128.

Discusses what psychologists, after years of study, now know about intergroup bias and conflict. It is stated that most people reveal unconscious, subtle biases, which are relatively automatic, cool, indirect, ambiguous, and ambivalent. Subtle biases underlie ordinary discrimination: comfort with one's own in-group, plus exclusion and avoidance of out-groups. Such biases result from internal conflict between cultural ideals and cultural biases. On the other hand, a small minority of people, extremists, do harbor blatant biases that are more conscious, hot, direct, and unambiguous. Blatant biases underlie aggression, including hate crimes. Such biases result from perceived intergroup conflict over economics and values, in a world perceived to be hierarchical and dangerous. Reduction of both subtle and blatant bias results from education, economic opportunity, and constructive intergroup contact. (PsycINFO Database Record (c) 2005 APA, all rights reserved)

Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from status and competition. *Journal of Personality and Social Psychology*, 82(6), 878-902.

This article presents results of research proceeding from the theoretical assumption that status is associated with high ratings of competence, while competition is related to low ratings of warmth. Included in the article are ratings of various ethnic and gender groups as a function of ratings of competence and warmth. These illustrate the average content of the stereotypes held about these groups in terms of the dimensions of competence and warmth, which are often key elements of evaluation.

Katznelson, I. (2006). When Affirmative Action Was White. *Poverty and Race Research Action Council* 15(2).

This article proposes that many federal programs can be best understood as “affirmative action for whites” both because in some cases substantial numbers of other groups were excluded from benefiting from them, or because the primary beneficiaries were whites. It states the rationale for contemporary affirmative action as “corrective action” for these exclusionary policies and programs.

Padilla, R. V. and Chavez, R. C. (1995). Introduction. *The Leaning Ivory Tower: Latino Professors in American Universities* (pp. 1-16). New York, State University of New York Press.

This book includes 12 contributions from Latino and Latina professors and academics with experience in universities throughout the United States. The introduction provides an overview

Steele, C. M. (1997). A threat in the air: How stereotypes shape the intellectual identities and performance of women and African-Americans. *American Psychologist*, 52, 613-629.

This paper reviews empirical data to show that negative stereotypes about academic abilities of women and African Americans can hamper their achievement on standardized tests. A 'stereotype threat' is a situational threat in which members of these groups can fear being judged or treated stereotypically; for those who identify with the domain to which the stereotype is relevant, this predicament can be self-threatening and impair academic performance. Practices and policies that can reduce stereotype threats are discussed.

***Valian, V.** (1998). Gender schemas at work. *Why So Slow? The Advancement of Women*. Cambridge, Mass.: MIT Press.

This book attempts to uncover the invisible barriers that prevent women from achieving the same professional success as men. Valian's arguments are based on statistical laboratory and field studies and center around gender schemas – our implicit hypotheses about sex differences. Though gender schemas are not entirely inaccurate, Valian argues that schemas alter our ability to evaluate men and women without bias. In general, the schema of a woman is incompatible with the schema of a successful professional. The consequence is that professional women are often underrated, while their male counterparts are overrated. Because of these imbalances, however slight, women accumulate advantage at a slower rate than men.

Tutorials for Change: Gender Schemas and Science Careers (Valian, V. Hunter College of the City University of New York).

<http://www.hunter.cuny.edu/gendertutorial/tutorials.htm>

This Web link provides four tutorials, designed as slides with voice-over narration. The narration will start automatically with each slide. You may stop the narration by clicking on "stop narration".

1a. What does the problem look like in science?

Gannon, F., Quirk, S., & Guest, S. (2001). Are women treated fairly in the EMBO postdoctoral fellowship scheme? *European Molecular Biology Organization Reports* 2, 8, 655–657.

This article presents the findings from an analysis of the European Molecular Biology Organization Long Term Fellowship granting scheme in order to determine if gender bias exists in the program. When the success rate is calculated for the spring and autumn session for the years 1996–2001, the female applicants were, on average, 20% less successful than the males

General Accounting Office (1994). *Peer Review: Reforms Needed to Ensure Fairness in Federal Agency Grant Selection*. 138.

GAO examined grant selection in three federal agencies that use peer review: the National Institutes of Health (NIH), the National Science Foundation (NSF), and the National Endowment for the Humanities (NEH). At each agency, GAO collected administrative files on a sample of grant proposals, approximately half of which had been funded. GAO then surveyed almost 1,400 reviewers of these proposals to obtain information not available from the agencies. In addition, GAO interviewed agency officials and reviewed documents to obtain procedural and policy information. GAO also observed panel meetings at each agency.

Kulis, S., Chong, Y., & Shaw, H. (1999). Discriminatory organizational contexts and black scientists on postsecondary faculties. *Review in Higher Education*, 40(2), 115-148.

This article examines the role of various kinds of institutional discrimination in producing the underrepresentation of black faculty.

Long, J. Scott, ed. (2001). Executive Summary. *From Scarcity to Visibility: Gender Differences in the Careers of Doctoral Scientists and Engineers* (pp.1-8). Washington, D.C.: National Academy Press.

This excerpt provides an overview of differences in the science careers of men and women.

***Mervis, J.** (2005). A Glass Ceiling for Asian Scientists? *Science*, 310, 606-607.

This article documents the low rate of Asian and Asian American scientists at higher and leadership levels even in fields where they are relatively numerous at lower ranks.

Nelson, D. J., & Rogers, D. C. (2004). *A national analysis of diversity in science and engineering faculties at research universities.*

This report looks at the representation of women and minorities in the 'top 50' departments of science and engineering disciplines in research universities, as ranked by the National Science Foundation according to research funds expended. The report is based on survey data obtained from these departments and covers the years 1993 to 2002. The analysis examines degree attainment (BS and PhD) and representation on the faculty in the corresponding disciplines. The data demonstrate that while the representation of women attaining a PhD in science and engineering has significantly increased in this period, the corresponding faculties remain overwhelmingly dominated by white men.

***Wenneras, C. & Wold, A. (1997).** Nepotism and sexism in peer-review. *Nature*, 387, 341-343.

This study assessed gender differences in ratings applications of postdoctoral fellowships from the Swedish Medical Research Council, as well as predictors of those ratings. Overall female applicants were rated lower than male applicants, and therefore the rate of awards to females was lower than that to males. Using objective criteria of scientific productivity, the researchers found that in fact female applicants had to be 2.5 times more productive than their male counterparts in order to receive the same "competence" ratings from reviewers. Parallel findings were reported for US funding agencies in a 1994 GAO report on *Peer Review: Reforms Needed to Ensure Fairness in Federal Agency Grant Selection*. Related issues have been raised in the recent (2004) GAO report *Gender Issues: Women's Participation in the Sciences has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX*.

2. How does evaluation bias actually operate?

***Bertrand, M., & Mullainathan S. (2004).** Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *The American Economic Review* 94(4), 991-1013; "Employers' Replies to Racial Names." NBER Website. Thursday, August 31, 2006. <<http://www.nber.org/digest/sep03/w9873.html>>.

Empirical study demonstrating impact of implicit discrimination by race, and not attributable to class.

Bertrand, M., Chugh, D., & Mullainathan, D. (2005). Implicit discrimination. *American Economic Review*, 95(2), 94-98.

Reflective discussion of how and where implicit discrimination operates. Includes useful review of the literature, and fairly extended discussion of research needed.

Biernat & Kobrynowicz (1997). Gender- and race-based standards of competence: Lower minimum standards but higher ability standards for devalued groups. *Journal of Personality and Social Psychology*, 72 (3), 544-557.

Stereotypes may influence judgment via assimilation, such that individual group members are evaluated consistently with stereotypes, or via contrast, such that targets are displaced from the overall group expectation. Two models of judgment—the shifting standards model and status characteristics theory—provide some insight into predicting and interpreting these apparently contradictory effects. In 2 studies involving a simulated applicant-evaluation setting, we predicted and found that participants set lower minimum-competency standards, but higher ability standards, for female than for male and for Black than for White applicants. Thus, although it may be easier for low- than high status group members to meet (low) standards, these same people must work harder to prove that their performance is ability based.

***Caffrey, M. (1997, May 12).** Blind auditions help women. Princeton Weekly Bulletin.

Based on **Goldin, C & Rouse, C. (2000)**. Orchestrating impartiality: The impact of “blind” auditions on female musicians. *American Economic Review*, 90, 715-741.

A change in the audition procedures of symphony orchestras—adoption of “blind” auditions with a “screen” to conceal the candidate’s identity from the jury—provides a test for gender bias in hiring and advancement. Using data from actual auditions for 8 orchestras over the period when screens were introduced, the authors found that auditions with screens substantially increased the probability that women were advanced (within the orchestra) and that women were hired. These results parallel those found in many studies of the impact of blind review of journal article submissions.

Heilman, M. E., Wallen, A. S., Fuchs, D., & Tamkins, M. M. (2004). Penalties for Success: Reactions to Women Who Succeed at Male Gender-Typed Tasks. *Journal of Applied Psychology*, 89(3), 416-427

This study investigated reactions of subjects to a woman's success in a male gender-typed job. The results showed that when women were acknowledged to have been successful, they were less liked and more personally derogated than equivalently successful men. The data also showed that being disliked can affect career outcome, both for performance evaluation and reward allocation.

Martell, R. F. (1996). What Mediates Gender Bias in Work Behavior Ratings? *Sex Roles* 35(3/4): 153-169.

Shows that more effective work behaviors are retrospectively attributed to a fictitious male police officer than a fictitious female one—even though they are rated equivalently at first. Evidence in the study shows that this results from overvaluing male officers’ performance rather than derogating females’.

Merton, R. K. (1968). The Matthew Effect in science. *Science*, 159, 56-63.

Argues that there is a powerful bias that operates in science, for scientific rewards and recognition to flow to those who are already known.

Nosek, B.A., Banaji, M.R., & Greenwald, A.G. (2002). Harvesting implicit group attitudes and beliefs from a demonstration web site. *Group Dynamics: Theory, Research and Practice*, 6, 101-115.

This article demonstrates widely-shared schemas, particularly “implicit” or unconscious ones, about race, age and gender.

***Steinpreis, R.E., Anders, K.A. & Ritzke, D. (1999)**. The impact of gender on the review of the curricula vitae of job applicants and tenure candidates: A national empirical study. *Sex Roles*, 41, 7/8, 509-528.

The authors of this study submitted the same c.v. for consideration by academic psychologists, sometimes with a man’s name at the top, sometimes with a woman’s. In one comparison, applicants for an entry-level faculty position were evaluated. Both men and women were more likely to hire the “male” candidate than the “female” candidate, and rated his qualifications as higher, despite identical credentials. In contrast, men and women were equally likely to recommend tenure for the “male” and “female” candidates (and rated their qualifications equally), though there were signs that they were more tentative in their conclusions about the (identical) “female” candidates for tenure.

Thompson, M. & Sekaquaptewa, D. (2002). When being different is detrimental: Solo status and the performance of women and minorities. *Analyses of Social Issues and Public Policy*, 2, 183-203.

This article spells out how the absence of “critical mass” can lead to negative performance outcomes for women and minorities. It addresses the impact on both the actor and the perceiver (evaluator).

***Trix, F. & Psenka, C.** (2003). Exploring the color of glass: letters of recommendation for female and male medical faculty. *Discourse & Society* 14(2): 191-220.

This study compares over 300 letters of recommendation for *successful* candidates for medical school faculty position. Letters written for female applicants differed systematically from those written for male applicants in terms of length, in the percentages lacking basic features, in the percentages with “doubt raising” language, and in the frequency of mention of status terms. In addition, the most common possessive phrases for female and male applicants (“her teaching” and “his research”) reinforce gender schemas that emphasize women’s roles as teachers and students and men’s as researchers and professionals.

3. Strategies for reducing the impact of bias on judgments

***Bauer, C.C. & Baltes, B.B.** (2002). Reducing the effects of gender stereotypes on performance evaluations. *Sex Roles*, 9/10, 465-476.

This study is one of many showing (1) that people vary in the degree to which they hold certain stereotypes and schemas (2) that having those schemas influences their evaluations of other people; and (3) that it is possible to reduce the impact of commonly-held stereotypes or schemas by relatively simple means. In this study college students with particularly negative stereotypes about women as college professors were more likely to rate accounts of specific incidents of college classroom teaching behavior negatively, if they were described as performed by a female. In the second phase of the study students’ reliance on their stereotypes was successfully reduced by providing them with time and instructions to recall the specific teaching behaviors of the instructors in detail. Thus, focusing attention on specific evidence of an individual’s performance eliminated the previously-demonstrated effect of gender schemas on performance ratings.

Chesler, M. A. (1996). Protecting the investment: Understanding and responding to resistance. *The Diversity Factor* 4(3), 2-10

This article discusses common barriers to successful implementation of diversity-related cultural change efforts, including both those that are intentional and unintentional. It also outlines strategies for addressing or dealing with these various forms of resistance.

Dovidio, J. F., Kawakami, K., & Gaertner, S.L.(2000). Reducing contemporary prejudice: Combating explicit and implicit bias at the individual and intergroup level. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 137-163). Mahwah, NJ: Erlbaum.

Review of the literature on how to ameliorate the impact of explicit and implicit biases.

NSF ADVANCE at the University of Michigan
Institute for Research on Women and Gender
University of Michigan, Ann Arbor, MI 48109-1290
<http://www.umich.edu/~advproj>