A D V A N C E

E X C E L L E N C E | E Q U I T Y | D I V E R S I T Y

UNCONSCIOUS BIAS

ANNOTATED BIBLIOGRAPHY

Bakian, A.V., Sullivan, K.A. (2010). The effectiveness of institutional intervention on minimizing demographic inertia and improving the representation of women faculty in higher education. *International Journal of Gender, Science, and Technology*, *2*(2). Retrieved July 7, 2010, from http://genderandset.open.ac.uk/index.php/genderandset/article/view/68/128.
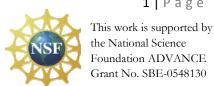
Women remain under-represented among full time tenured/tenure-track science and engineering faculty at research universities in the United States despite their increasing availability in the employment pool. In response, intervention strategies aimed at boosting their participation have been introduced at university and national levels. Efforts to improve women's representation may be challenged by demographic inertia, the tendency for the maintenance of the entrenched population structure that favors men despite improvements in women's vital parameters. Here, we investigate the effectiveness of the U.S. National Science Foundation's ADVANCE institutional intervention program at curtailing demographic inertia at a research university dubbed 'Snow State University' (SSU). We found that demographic inertia's impact on women's representation was lessened during ADVANCE. Yet to achieve long-lasting improvements in women's representation, universities will need to increase their recruitment of women at the associate and full professor ranks while maintaining promotion and retention probabilities favorable to women over the long-term. [Abstract from authors].

Baltes, B. B., Bauer, C. B., & Frensch, P. A. (2007). Does a structured free recall intervention reduce the effect of stereotypes on performance ratings and by what cognitive mechanism?. *Journal of Applied Psychology*, *92*(1), 151.

The purpose of this article was to extend previous work on the effect of racial biases on performance ratings. The 1st of 2 studies examined whether a structured free recall intervention decreased the influence of negative racial biases on the performance ratings of Black men. Results indicated that without the intervention, raters who endorsed a negative stereotype of Black men as managers evaluated Black men more negatively. However, the structured free recall intervention successfully reduced these effects. The second study examined in more detail the cognitive mechanisms underlying the success of the intervention. Results are consistent with the assumption that the reduction of the influence of racial biases under structured free recall conditions is a consequence of a modified strength threshold for retrieval of behaviors from memory [Abstract from authors].

Bauer, C. C. & Baltes, B.B. (2002). Reducing the effects of gender stereotypes on performance evaluations. *Sex Roles, 47, 465-476.*

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The purpose of this research was to extend previous work on gender bias in performance evaluation. Specifically, we examined whether a structured free recall intervention could decrease the influence of traditional gender-stereotypes on the performance evaluations of women. Two hundred & forty-seven college students provided performance ratings for vignettes that described the performance of male or female college professors. Results indicated that without the intervention, raters who have traditional stereotypes evaluated women less accurately & more negatively. Conversely, the structured free recall intervention successfully eliminated these effects. The usefulness of the structured free recall intervention as a tool for decreasing the influence of gender stereotypes on performance ratings is discussed. [Adapted from the source document].

Bertrand, M. & Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Economic Review, 94,* 991-1013.
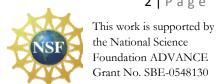
We study race in the labor market by sending fictitious resumes to help-wanted ads in Boston and Chicago newspapers. To manipulate perceived race, resumes are randomly assigned African-American- or White-sounding names. White names receive 50 percent more callbacks for interviews. Callbacks are also more responsive to resume quality for White names than for African-American ones. The racial gap is uniform across occupation, industry, and employer size. We also find little evidence that employers are inferring social class from the names. Differential treatment by race still appears to still be prominent in the U.S. labor market. [Abstract from author].

Biernat, M., Fuegen, K., & Kobrynowicz, D. (2010). Shifting standards and the inference of incompetence: Effects of formal and informal evaluation tools. *Personality and Social Psychology Bulletin*, *36*(7), 855.

The authors distinguish between minimum and confirmatory standards of incompetence and hypothesize that for groups stereotyped as relatively competent (or deficient in *in*competence), minimum standards of incompetence are lower (suspicion of incompetence is triggered sooner) but confirmatory standards are higher, relative to groups stereotyped as relatively incompetent. An initial study demonstrated this evidentiary pattern for male versus female targets. In Studies 2 and 3, participants were exposed to a poor-performing male or female (Study 2) or Black or White male (Study 3) trainee and were asked to record "notable" behaviors in either their "informal notes" (instantiating a minimum standard) or a "formal performance log" (instantiating a confirmatory standard). Consistent with predictions, fewer incompetent behaviors were recorded in the formal log than in informal notes for White male trainees. Firing decisions generally mimicked these patterns and in Study 3 were partially mediated by the accessibility of incompetent behaviors [Abstract from authors].

Biernat, M. & Manis, M. (1994). Shifting standards and stereotype-based judgments. *Journal of Personality and Social Psychology*, *66*(1), 5-20.

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Four studies tested a model of stereotype-based shifts in judgment standards developed by M. Biernat, M. Manis, and T. E. Nelson (1991). The model suggests that subjective judgments of target persons from different social groups may fail to reveal the stereotyped expectations of judges, because they invite the use of different evaluative standards; more "objective" or common rule indicators reduce such standard shifts. The stereotypes that men are more competent than women, women are more verbally able than men, Whites are more verbally able than Blacks, and Blacks are more athletic than Whites were successfully used to demonstrate the shifting standards phenomenon. Several individual-difference measures were also effective in predicting differential susceptibility to standard shifts, and direct evidence was provided that differing comparison standards account for substantial differences in target ratings.[Abstract from author].
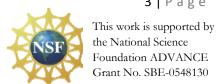
Biernat, M., Tocci, M. J., & Williams, J. C. (2011). The language of performance evaluations: Gender-based shifts in content and consistency of judgment. *Social Psychological and Personality Science*, 1-7.

Performance evaluations of male and female junior attorneys in a Wall Street law firm were analyzed. Male supervisors judged male attorneys more favorably than female attorneys on numerical ratings that mattered for promotion but offered narrative comments that showed either no sex effects or greater favorability toward women. Judgments of male attorneys were more consistent overall than they were for female attorneys, and predictors of numerical ratings differed by sex: Narrative ratings of technical competence mattered more for men than women, and narrative ratings of interpersonal warmth mattered more for women than men. Open-ended use of positive performance words—the only outcome that favored women—did not translate into positive numerical ratings for women. The data suggest subtle patterns of gender bias, in which women were harmed by not meeting gendered expectations of interpersonal warmth but were less benefited than men by meeting masculine standards of high technical competence [Abstract from authors].

Bilimoria, D., Buch, K.K. (2010). The search is on: Engendering faculty diversity through more effective search and recruitment. *Change: The Magazine of Higher Learning*, *42*(4), 27-32.

The underrepresentation of women and minority faculty in the STEM disciplines continues to be a major concern to university leaders, policy makers, and scientists. While of number of complex factors across the entire academic pipeline play significant roles in this problem, important contributing causes of the underrepresentation of women and minorities on the STEM faculty are how recruitment is conducting and how hiring decisions are made. The authors elucidate how universities can systematically transform their conventional recruitment practices to develop a more diverse faculty and a more inclusive faculty climate. [Abstract from authors, edited by UA ADVANCE staff].

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Blair, I.V. & Banaji, M.R. (1996). Automatic and controlled processes in stereotype priming. *Journal of Personality and Social Psychology,70*(6), 1142-1163.

The experiments in this article were conducted to observe the automatic activation of gender stereotypes and to assess theoretically specified conditions under which such stereotype priming may be moderated. Across 4 experiments, 3 patterns of data were observed: (a) evidence of stereotype priming under baseline conditions of intention and high cognitive constraints, (b) significant reduction of stereotype priming when a counterstereotype intention was formed even though cognitive constraints were high, and (c) complete reversal of stereotype priming when a counterstereotype intention was formed and cognitive constraints were low. These data support proposals that stereotypes may be automatically activated as well as proposals that perceivers can control and even eliminate such effects.
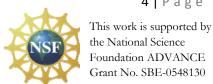
Blair, I.V., Ma, J.E., & Lenton, A.P. (2001). Imagining stereotypes away: The moderation of implicit stereotypes through mental imagery. *Journal of Personality and Social Psychology, 81*(5), 828-841.

Research on implicit stereotypes has raised important questions about an individual's ability to moderate and control stereotypic responses. With few strategies shown to be effective in moderating implicit effects, the present research investigates a new strategy based on focused mental imagery. Across 5 experiments, participants who engaged in counterstereotypic mental imagery produced substantially weaker implicit stereotypes compared with participants who engaged in neutral, stereotypic, or no mental imagery. This reduction was demonstrated with a variety of measures, eliminating explanations based on response suppression or shifts in response criterion. Instead, the results suggest that implicit stereotypes are malleable, and that controlled processes, such as mental imagery, may influence the stereotyping process at its early as well as later stages. [Abstract from author].

Brescoll, V.L., Dawson, E., & Uhlmann, E.L. (2010). Hard won and easily lost: The fragile status of leaders in gender-stereotype- incongruent occupations. *Psychological Science,* **Retrieved from: http://pss.sagepub.com/cgi/content/short/0956797610384744v1.**

Seventy-five males and 127 females (mean age = 35.49 years) participated in a study employing a 2 (target's gender) × 2 (job performance: mistake vs. no mistake) × 2 (occupation: gender congruent vs. gender incongruent) between-subjects design. Pretesting revealed two occupations, one strongly associated with women and the other with men, that were equivalent in both status and gender congruity: president of a women's college and police chief. Participants were randomly assigned to read and evaluate a single scenario that described a target's occupation and a situation in which he or she did or did not make a mistake. In the absence of a mistake, targets were given equivalent status regardless of their occupancy's gender congruency, $F(1, 95) < 1$, n.s. But among those who made a mistake, both male and female targets in gender-incongruent jobs (males: $M = 6.14$, $SD = 2.14$; females: $M = 6.33$,

SD = 2.77) received less status than those in gender-congruent jobs (males: *M* = 7.80, *SD* = 1.88; females: *M* = 7.38, *SD* = 1.94), $F(1, 105) = 7.69$, $p < .01$. When the targets did not make an error, they were seen as equally competent whether they were in a gender-congruent job or not, $F(1, 97) = 1.87$, n.s. However, when a mistake was made, both male and female targets in the gender-incongruent occupations were seen as less competent (females: *M* = 4.89, *SD* = 2.04; males: *M* = 5.30, *SD* = 2.59) than the targets in the gender-congruent jobs (females: *M* = 6.25, *SD* = 2.24; males: *M* = 5.72, *SD* = 2.40), $F(1, 105) = 10.26$, $p < .01$. [Abstract from author]

Butler, D. & Geis, F.L. (1990). Nonverbal Affect Responses to Male and Female Leaders : Implications for Leadership Evaluations. *Journal of Personality and Social Psychology, 58*(1), 48-59.
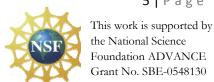
It was hypothesized that female leaders would elicit more negative nonverbal affect responses from other group members than male leaders offering the same initiatives. Male and female subjects participated in 4-person discussions in which male or female confederates assumed leadership. During the discussion subjects' nonverbal affect responses to the confederates were coded from behind one-way mirrors. Female leaders received more negative affect responses and fewer positive responses than men offering the same suggestions and arguments. Female leaders received more negative than positive responses, in contrast to men, who received at least as many positive as negative responses. The data demonstrate a concrete social mechanism known to cause devaluation of leadership, and thus support a more social interpretation of female leadership evaluations, in contrast to previous interpretations based on private perceptual bias. [Abstract from author].

Committee on Maximizing the Potential of Women in Academic Science and Engineering, National Academy of Sciences, National Academy of Engineering, and Institute of Medicine. (2007). *Beyond bias and barriers: Fulfilling the potential of women in academic science and engineering.* **Washington, D.C.: The National Academies Press.**

Beyond Bias and Barriers explains that eliminating gender bias in academia requires immediate overarching reform, including decisive action by university administrators, professional societies, federal funding agencies and foundations, government agencies, and Congress. If implemented and coordinated across public, private, and government sectors, the recommended actions will help to improve workplace environments for all employees while strengthening the foundations of America's competitiveness. [Abstract from publisher].

Correll, S.J., Bernard, S. & Paik, In. (2007). Getting a job: Is there a motherhood penalty. *American Journal of Sociology, 112*(5), 1297-1338.

Survey research finds that mothers suffer a substantial wage penalty, although the causal mechanism producing it remains elusive. The authors employed a laboratory experiment to evaluate the hypothesis that status-based discrimination plays an important role and an audit study of actual employers to assess its real-world implications. In both studies, participants

evaluated application materials for a pair of same-gender equally qualified job candidates who differed on parental status. The laboratory experiment found that mothers were penalized on a host of measures, including perceived competence and recommended starting salary. Men were not penalized for, and sometimes benefited from, being a parent. The audit study showed that actual employers discriminate against mothers, but not against fathers.

Crothers, L.M., Hughes, T.L., Schmitt, A.J., et.al. (2010). Has equity been achieved? Salary and promotion negotiation practices of a national sample of school psychology university faculty. *The Psychologist-Manager Journal, 13*(1), 30-49.

Psychologists are likely to consider issues of compensation when considering employment at a university. Correspondingly, this study explored the salary and promotion negotiation practices of female and male school psychology university faculty members. In all, 191 female and 115 male faculty members completed a survey regarding negotiation practices and job satisfaction. Although significantly more faculty members reported successful salary negotiations than failed attempts, results suggest that female faculty members earn significantly less than do their male colleagues, controlling for years of experience. No gender differences were found regarding participants' willingness to negotiate for increased salary; however, male faculty members were more likely to negotiate for a promotion. Of those individuals who perceived a negative response for salary negotiation, more female faculty members reported that their gender contributed to the negative response. The positive relation between job satisfaction and salary that the authors observed among male faculty members was not found for female faculty members. Job satisfaction and negotiating for a promotion was positively correlated for male faculty members, but for female faculty members, job satisfaction was positively correlated with the belief that their gender positively affected their negotiation and negatively correlated with the perception of penalty for negotiation. [Abstract from authors].

Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2004). When professionals become mothers, warmth doesn't cut the ice. *Journal of Social Issues, 60,* 701–718.

Cuddy et al (2004) used a stereotype content model to investigate how working mothers are perceived relative to childless professionals and working fathers. In a 2 (sex = male or female) x 2 (child = yes or no) between-participants design, they asked participants (N=122) to evaluate three fictitious professionals' profiles on traits reflecting warmth (good-natured, sincere, warm, trustworthy) and competence (capable, efficient, organized, skillful) using a seven-point Likert scale. Participants also evaluated the profiles on three discrimination proxy items (likelihood to hire, promote, and continue to train the professional). One profile varied only one two factors: gender and whether or not the professional was a parent. The other two profiles, one for a middle-aged woman with a BA in economics who commutes to work for four ten-hour days and the other for a man with a BA in communications who works five eight-hour days, acted as filler profiles. Four important findings arose. First, when working women become mothers, they

trade perceived competence for perceived warmth. Second, working men don't make this trade; when they become fathers, they gain perceived warmth and maintain perceived competence. Third, people report less interest in hiring, promoting, and educating working moms relative to working dads and childless employees. Finally, competence ratings predict interest in hiring, promoting, and educating workers. Thus, working moms' gain in perceived warmth does not help them, but their loss in perceived competence does hurt them.

Davison, H. K. & Burke, M.J. (2000). Sex discrimination in simulated employment contexts: A meta-analytic investigation. *Journal of Vocational Behavior, 56*(2), 225-248.

This study meta-analytically tested hypotheses concerning factors that affect sex discrimination in simulated employment contexts. These hypotheses, derived from the social psychological literature on stereotyping, predicted that salience of applicant sex, job sex-type, sex of rater, and amount of job-relevant information would affect discrimination against female and male applicants. Generally, the hypotheses concerning job sex-type and job-relevant information were supported. Female and male applicants received lower ratings when being considered for an opposite-sex-type job, and the difference between ratings of males and females decreased as more job-relevant information was provided. However, ratings of males and females did not differ as hypothesized in regard to salience of sex and rater sex. The research and practice implications of these results are discussed.

Eagly, A. H., & Carli, L.L. (2003). The female leadership advantage: An evaluation of the evidence. *The Leadership Quarterly, 14,* 807-834.

Journalists and authors of trade books increasingly assert a female advantage in leadership, whereby women are more likely than men to lead in a style that is effective under contemporary conditions. Contrasting our analysis of these claims with Vecchio's [Leadersh. Q. 13 (2002) 643] analysis, we show that women have some advantages in typical leadership style but suffer some disadvantages from prejudicial evaluations of their competence as leaders, especially in masculine organizational contexts. Nonetheless, more women are rising into leadership roles at all levels, including elite executive roles. We suggest reasons for this rise and argue that organizations can capture the symbols of progressive social change and modernity by appointments of women in key positions.

Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, *109*(3), 573-598.

A role congruity theory of prejudice toward female leaders proposes that perceived incongruity between the female gender role and leadership roles leads to 2 forms of prejudice: (a) perceiving women less favorably than men as potential occupants of leadership roles and (b) evaluating behavior that fulfills the prescriptions of a leader role less favorably when it is enacted by a woman. One consequence is that attitudes are less positive toward female than male leaders and potential leaders. Other consequences are that it is more difficult for women

to become leaders and to achieve success in leadership roles. Evidence from varied research paradigms substantiates that these consequences occur, especially in situations that heighten perceptions of incongruity between the female gender role and leadership roles. [Abstract from authors].

Ellemers, N., van den Heuvel, H,, de Gilder, D., Maass, A., & Bonvini A. (2004). The underrepresentation of women in science: differential commitment or the queen bee syndrome? *The British Journal of Social Psychology, 43,* **315-338.**

We examined possible explanations for the underrepresentation of women among university faculty, in two different national contexts. In the Netherlands, a sample of doctoral students (N = 132) revealed no gender differences in work commitment or work satisfaction. Faculty members in the same university (N = 179), however, perceived female students to be less committed to their work and female faculty endorsed these gender-stereotypical perceptions most strongly. A second study, in Italy, replicated and extended these findings. Again, no gender differences were obtained in the self-descriptions of male and female doctoral students (N = 80), while especially the female faculty (N = 93) perceived female students as less committed to their work than male students. Additional measures supported an explanation in social identity terms, according to which individual upward mobility (i.e. of female faculty) implies distancing the self from the group stereotype which not only involves perceiving the self as a non-prototypical group member, but may also elicit stereotypical views of other in-group members. [Abstract from author].

Fiske, S.T. & Taylor, S.E. (1991). *Social cognition* **(2nd ed.). Mcgraw-Hill Book Company.**

This text by Susan Fiske and Shelley Taylor has been the standard resource for scholars and students interested in the fullest understanding of the areas of social cognition. Now in its thoroughly revised second edition, "Social Cognition" goes even further in organizing and critically evaluating the theories, evidence, and practical applications centered around the basic issue of how people make sense of their social environment. By combining new developments in cognitive psychology on attention, memory, and inference, with those emerging from the study of attitudes, affect, and motivation, Fiske and Taylor give us the "state of the art" manual for appreciating that aspect of human nature which focuses on how people think about themselves and about others. [from the foreword]

Foschi, M. (2000). Double standards for competence: Theory and research. Annual Reviews ,Inc.

This article reviews theory and research on double standards, namely, the use of different requirements for the inference of possession of an attribute, depending on the individuals being assessed. The article focuses on double standards for competence in task groups and begins by examining how status characteristics (e.g. gender, ethnicity, socioeconomic class) become a basis for stricter standards for the lower status person. I also discuss other bases for this

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practice (e.g. personality characteristics, allocated rewards, sentiments of either like or dislike). Next, I describe double standards in the inference of other types of valued attributes (e.g. beauty, morality, mental health) and examine the relationship between these practices and competence double standards. The article concludes with a discussion of "reverse" double standards for competence, namely, the practice of applying more lenient ability standards to lower status individuals. [Abstract from author].

Foschi, M. (1996). Double standards in the evaluation of men and women. *Social Psychology Quarterly, 59*(3), 237-254.

This article presents the results from two expectation-states studies on gender and double standards for task competence. The emergence of such standards under several experimental conditions is investigated. In both studies, men and women, participating in opposite-sex dyads, worked first individually and then as a team in solving a perceptual task. As predicted, results from Experiment 1 show that although subjects of both sexes achieved equal levels of performance, women were held to a stricter standard of competence than men. This difference was more pronounced when the referent of the standard was the partner rather than self. Experiment 2 investigates the extent to which the double standard is affected by level of accountability for one's assessments. Results show a significant difference by sex of referent of standard when accountability was low, but not when it was increased. In both studies, measures of perceived competence in self and in partner reflected reported standards, as predicted. Theoretical and practical implications of these findings are discussed. [Abstract from author].

Foschi, M., Lai, L., & Sigerson, K. (1994). Gender and double standards in the assessment of job applicants. *Social Psychology Quarterly,57*(4), 326-339.

This study tests hypotheses on the use of gender-based double standards in the assessment of task competence. The design involves the examination of files of applicants for engineering jobs, and recreates several features of a hiring decision. The critical choice to be made by each subject was between a male and a female applicant with average but slightly different academic records. In one experimental condition the man held the better record; in the other, the situation was reversed. Results for male subjects show that when the male candidate was the better performer, he was chosen more often, and was considered more competent and more suitable, than when the female candidate was in that position. Female subjects, on the other hand, did not show any differences regarding sex of applicant. This sex of subject effect is examined in detail. A discussion of the paper's theoretical and methodological contributions to the study of ability evaluation is also included. [Abstract from author].

Galinsky, A. D. & Moskowitz, G.B. (2000). Perspective-taking: Decreasing stereotype expression, stereotype accessibility, and in-group favoritism. *Journal of Personality and Social Psychology, 78*(4), 708-724.

Using 3 experiments, the authors explored the role of perspective-taking in debiasing social thought. In the 1st 2 experiments, perspective-taking was contrasted with stereotype suppression as a possible strategy for achieving stereotype control. In Experiment 1, perspective-taking decreased stereotypic biases on both a conscious and a nonconscious task. In Experiment 2, perspective-taking led to both decreased stereotyping and increased overlap between representations of the self and representations of the elderly, suggesting activation and application of the self-concept in judgments of the elderly. In Experiment 3, perspective-taking reduced evidence of in-group bias in the minimal group paradigm by increasing evaluations of the out-group. The role of self--other overlap in producing prosocial outcomes and the separation of the conscious, explicit effects from the nonconscious, implicit effects of perspective-taking are discussed. [Abstract from author].
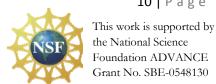
Goldin, C. & Rouse, C. (2000). Orchestrating impartiality: The impact of "blind" auditions on female musicians. *The American Economic Review, 90*(4), 715-741.

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 sex-biased hiring. Using data from actual auditions, in an individual fixed-effects framework, it is found that the screen increases the probability a woman will be advanced and hired.

Gundersen, D. E., Tinsley, D.B., & Terpstra, D.E. (1996). Empirical assessment of impression management biases: The potential for performance appraisal error. *Journal of Social Behavior and Personality, 11,* 57-77.

This experimental study used senior university students in a business curriculum to explore the role of impression management as a bias in a performance appraisal setting. Subordinate performance and the gender of both raters and ratees were also included as factors in the study. As expected, findings show that performance is the primary determinant of appraisal scores as a main effect where all evaluation measures were significant at the p < .001 level. Performance also interacted significantly with both the subordinate gender and rater gender variables. Impression management, both as a main effect and in interaction with ratee gender, was also found to influence performance appraisal scores, although to a lesser extent than performance. Defensive impression management tactics, including apologies and excuses, were generally found to have a negative influence on evaluations. The gender variables were only significant when interacting with performance and impression management conditions. [Abstract from author].

Heilman, M. E. & Okimoto, T.G. (2008). Motherhood: A potential source of bias in employment decisions. *Journal of Applied Psychology, 93,* 189-198.

Abstract: Results of 2 experimental studies in which job incumbents were said to be applying for promotions to traditionally male positions demonstrated bias against mothers in competence expectations and in screening recommendations. This bias occurred regardless of whether the research participants were students (Study 1) or working people (Study 2). Although anticipated job commitment, achievement striving, and dependability were rated as generally lower for parents than for nonparents, anticipated competence was uniquely low for mothers. Mediational analyses indicated that, as predicted, negativity in competence expectations, not anticipated job commitment or achievement striving, promoted the motherhood bias in screening recommendations; expected deficits in agentic behaviors, not in dependability, were found to fuel these competence expectations. These findings suggest that motherhood can indeed hinder the career advancement of women and that it is the heightened association with gender stereotypes that occurs when women are mothers that is the source of motherhood's potentially adverse consequences. [Abstract from author].

Heilman, M. E. & Okimoto, T.G. (2007). Why are women penalized for success at male tasks? The implied communality deficit. *Journal of Applied Psychology, 92,* 81–92.

In 3 experimental studies, the authors tested the idea that penalties women incur for success in traditionally male areas arise from a perceived deficit in nurturing and socially sensitive communal attributes that is implied by their success. The authors therefore expected that providing information of communality would prevent these penalties. Results indicated that the negativity directed at successful female managers—in ratings of likability, interpersonal hostility, and boss desirability—was mitigated when there was indication that they were communal. This ameliorative effect occurred only when the information was clearly indicative of communal attributes (Study 1) and when it could be unambiguously attributed to the female manager (Study 2); furthermore, these penalties were averted when communality was conveyed by role information (motherhood status) or by behavior (Study 3). These findings support the idea that penalties for women's success in male domains result from the perceived violation of gender-stereotypic prescriptions. [Abstract from author].

Heilman, M. E., & Haynes, M. C. (2005). No credit where credit is due: Attributional rationalization of women's success in male–female teams. *Journal of Applied Psychology, 90,* 905–916.

In 3 experimental studies, the authors explored how ambiguity about the source of a successful joint performance outcome promotes attributional rationalization, negatively affecting evaluations of women. Participants read descriptions of a mixed-sex dyad's work and were asked to evaluate its male and female members. Results indicated that unless the ambiguity about individual contribution to the dyad's successful joint outcome was constrained by providing feedback about individual team member performance (Study 1) or by the way in which the task was said to have been structured (Study 2) or unless the negative expectations about women's performance were challenged by clear evidence of prior work competence

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(Study 3), female members were devalued as compared with their male counterparts—they were rated as being less competent, less influential, and less likely to have played a leadership role in work on the task. Implications of these results, both theoretical and practical, are discussed. [Abstract from author].

Heilman, M. E., Wallen, A. S., Fuchs, D., & Tamkins, M. M. (2004). Penalties for success: Reactions to women who succeed at male tasks. *Journal of Applied Psychology, 89,* **416–427.**

Abstract: A total of 242 subjects participated in 3 experimental studies investigating reactions to a woman's success in a male gender-typed job. Results strongly supported the authors' hypotheses, indicating that (a) when women are acknowledged to have been successful, they are less liked and more personally derogated than equivalently successful men (Studies 1 and 2); (b) these negative reactions occur only when the success is in an arena that is distinctly male in character (Study 2); and (c) being disliked can have career-affecting outcomes, both for overall evaluation and for recommendations concerning organizational reward allocation (Study 3). These results were taken to support the idea that gender stereotypes can prompt bias in evaluative judgments of women even when these women have proved themselves to be successful and demonstrated their competence. The distinction between prescriptive and descriptive aspects of gender stereotypes is considered, as well as the implications of prescriptive gender norms for women in work settings. [Abstract from author].
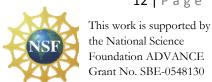
Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues,* **657-674.**

This review article posits that the scarcity of women at the upper levels of organizations is a consequence of gender bias in evaluations. It is proposed that gender stereotypes and the expectations they produce about both what women are like (descriptive) and how they should behave (prescriptive) can result in devaluation of their performance, denial of credit to them for their successes, or their penalization for being competent. The processes giving rise to these outcomes are explored, and the procedures that are likely to encourage them are identified. Because of gender bias and the way in which it influences evaluations in work settings, it is argued that being competent does not ensure that a woman will advance to the same organizational level as an equivalently performing man. [Abstract from author].

Heilman,M.E. & Stopeck, M.H. (1985). Attractiveness and corporate success: Different causal attributions for males and females. *Journal of Applied Psychology.*

113 working men and women were presented with the work history of an assistant vice president (AVP) of a midsized corporation who was either an attractive or unattractive male or female. Additionally, the AVP's rise to the senior ranks was depicted as either unusually rapid or normative in pace. Ss read the material and answered an attributional questionnaire. Results indicate that, as predicted, attractiveness had different effects on the degree to which the AVP's

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success was attributed to ability depending on whether the AVP was male or female: Males' ability attributions were enhanced and females' ability attributions were detrimentally affected by their good looks. Also as expected, capability judgments followed a similar pattern. Appearance was additionally shown to have different consequences for males and females when likeability and interpersonal integrity were rated. However, contrary to predictions, the rapidity of corporate ascent did not interact with appearance or sex in affecting attributions about or impressions of the stimulus AVPs. Conceptual and practical implications are discussed. [Abstract from author].
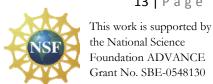
Heilman, M. E. & Stopeck, M.H. (1985.) Being attractive, advantage or disadvantage? Performance-based evaluations and recommended personnel actions as a function of appearance, sex, and job type. *Organizational Behavior and Human Decision Processes, 35*(2), 202-215.

Examined whether physical attractiveness differentially affects the performance evaluations and recommended personnel actions for men and women holding managerial and nonmanagerial jobs. 34 graduate business students received a set of 4 relatively equivalent performance review forms that presented information varying according to the job, sex, and appearance of the employee to be reviewed. Students were asked to evaluate present performance, predict future success, and indicate the appropriateness of various personnel actions. Data show that attractiveness was advantageous for women in nonmanagerial positions and disadvantageous for women in managerial ones. Unexpectedly, however, appearance had no effects whatsoever on reactions to men. Additional results indicate that attractiveness enhanced the perceived femininity of female stimulus people but did not enhance the perceived masculinity of the males. Data support the idea that the differential effects of appearance in work settings are mediated by gender characterizations and suggest that fluctuations in the perceived person-job fit are key to understanding the seemingly inconsistent reactions to attractive and unattractive women in employment situations. [Abstract from author].

Heilman, M. E. (1980). The impact of situational factors on personnel decisions concerning women: Varying the sex composition of the applicant pool. *Organizational Behavior and Human Performance, 26*(3), 386-395.

One hundred male and female MBA students evaluated a woman applicant for a managerial position when the proportion of women in the applicant pool was varied. Results indicated that personnel decisions of both males and females were significantly more unfavorable when women represented 25% or less of the total pool. Additional findings suggest that this effect was mediated by the degree to which sex stereotypes predominated in forming impressions of applicants. The results were interpreted as supportive of the thesis that situational factors can function to reduce the adverse effects of sex stereotypes in employment settings.

Heron, S. L., Lovell, E. O., Wang, E., & Bowman, S. H. (2009). Promoting diversity in emergency medicine: Summary recommendations from the 2008 Council of Emergency Medicine Residency Directors (CORD) Academic Assembly Diversity Workgroup. *Academic Emergency Medicine, 16,* **1-4.**

Although the U.S. population continues to become more diverse, ethnic and racial health care disparities persist. The benefits of a diverse medical workforce have been well described, but the percentage of emergency medicine (EM) residents from underrepresented groups (URGs) is small and has not significantly increased over the past 10 years. The Council of Emergency Medicine Resident Directors (CORD) requested that a panel of CORD members review the current state of ethnic and racial diversity in EM training programs. The objective of the discussion was to develop strategies to help EM residency programs examine and improve diversity in their respective institutions. Specific recommendations focus on URG applicant selection and recruitment strategies, cultural competence curriculum development, involvement of URG faculty, and the availability of institutional and national resources to improve and maintain diversity in EM training programs. [Abstract from author].

Hummert, M. L., Mazloff, D., & Henry, C. (1999). Vocal characteristics of older adults and stereotyping. *Journal of Nonverbal Behavior, 23*(2), **111-132.**

Two studies extended the study of the nonverbal correlates of age stereotypes. In Study 1, 40 young listeners assessed the age of 30 elderly speakers from three age groups: 60–69, 70–79, 80 and over. As expected, perceived age increased linearly with age group, although greater variability was found in judgments of male than of female speakers. For male speakers, mean vocal volume (intensity) and standard deviations in vocal volume were positively correlated with chronological and perceived age. For female speakers, mean pitch, standard deviations in pitch, and vocal jitter were positively correlated with chronological and perceived age. In Study 2, 40 young listeners selected trait sets corresponding to 3 positive and 3 negative elderly stereotypes to describe 6 young-old and 6 old-old speakers. As predicted, listeners associated the old-old voices of females (but not males) with fewer positive stereotypes than the young-old female voices. In addition, young-old male voices were associated with significantly fewer positive stereotypes than young-old female voices. Finally, male participants chose fewer positive stereotypes for young-old male voices than did female participants. These results provide information on the ways in which vocal characteristics may serve to activate stereotypes in interaction. [Abstract from author].

Hummert, M. L. & Garstka, T.A. (1994.) Stereotypes of the elderly held by young, middle-aged, and elderly adults. *Journal of Gerontology, 49*(5), **240-249.**

This two-part study extended the research on multiple stereotypes of elderly adults by examining the perceptions of young, middle-aged, and elderly adults. First, one set of participants engaged in a trait generation task which yielded a trait list for use in the second part of the study. Second, other participants sorted the set of traits into groups representing

different types of elderly individuals. Trait groupings were analyzed with hierarchical cluster analysis. Results supported the hypothesis that older adults have more complex representations of aging than do middle-aged and young ones, and that middle-aged adults have more complex representations than do young ones. For example, middle-aged and elderly adults reported more stereotypes of the elderly than did young adults, and elderly adults reported more stereotypes than did middle-aged adults. Results also showed, as expected, that these differences in complexity exist against a background of general agreement about the nature of aging: trait lists produced by those in the three age groups were significantly correlated, and the stereotype sets of the three age groups included seven shared stereotypes. Results are interpreted in terms of their support for two alternative explanations of the complexity differences: ingroup/outgroup and developmental. [Abstract from author].

Isaac, C., Lee, B., & Carnes, M. (2009). Interventions that affect gender bias in hiring: A systematic review. *Academic Medicine, 84*(10), 1440-1446.

Purpose: To systematically review experimental evidence for interventions mitigating gender bias in employment. Unconscious endorsement of gender stereotypes can undermine academic medicine's commitment to gender equity. Method: The authors performed electronic and hand searches for randomized controlled studies since 1973 of interventions that impact gender differences in evaluation of job applicants. Twenty-seven studies met all inclusion criteria. Interventions fell into three categories: application information, applicant features, and rating conditions. Results: The studies identified gender bias as the difference in ratings or perceptions of men and women with identical qualifications. Studies reaffirmed negative bias against women being evaluated for positions traditionally or predominantly held by men (male sex-typed jobs). The assessments of male and female raters rarely differed. Interventions that provided raters with clear evidence of job-relevant competencies were effective.   However, clearly competent women were rated lower than equivalent men for male sex-typed jobs unless evidence of communal qualities was also provided. A commitment to the value of credentials before review of applicants and women's presence at above 25% of the applicant pool eliminated bias against women. Two studies found unconscious resistance to "anti-bias" training, which could be overcome with distraction or an intervening task. Explicit employment equity policies and an attractive appearance benefited men more than women; whereas repeated employment gaps were more detrimental to men. Masculine-scented perfume favored the hiring of both sexes. Negative bias occurred against women who expressed anger or who were perceived as self-promoting. Conclusion: High-level evidence exists for strategies to mitigate gender bias in hiring. [Abstract from author].

Ito, T.A. & Urland, G.R. (2003). Race and gender on the brain: Electrocortical measures of attention to the race and gender of multiply categorizable individuals. *Journal of Personality and Social Psychology, 85*(4), 616-626.

The degree to which perceivers automatically attend to and encode social category information was investigated. Event-related brain potentials were used to assess attentional and working-memory processes on-line as participants were presented with pictures of Black and White males and females. The authors found that attention was preferentially directed to Black targets very early in processes (by about 100 ms after stimulus onset) in both experiments. Attention to gender also emerged early but occurred about 50 ms later than attention to race. Later working-memory processes were sensitive to more complex relations between the group memberships of a target individual and the surrounding social context. These working-memory processes were sensitive to both the explicit categorization task participants were performing as well as more implicit, task-irrelevant categorization dimensions. Results are consistent with models suggesting that information about certain category dimensions is encoded relatively automatically. [Abstract from author].
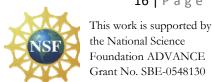
King, E.B., Mendoza, S.A., Madera, J.M., Hebl, M.R., & Knight, J.L. (2006). What's in a name? A multiracial investigation of the role of occupational stereotypes in selection decisions. *Journal of Applied Social Psychology, 36*(5), 1145-1159.

Bertrand & Mullainathan (2002) found evidence that race-typed names can have a significant influence on the evaluation of résumés. The current study expanded on their research by manipulating both the race (Asian American, Black, Hispanic, White) and quality of the résumé (high, low), and by considering occupational stereotypes as an explanatory mechanism. White male participants (N=155) read a fictitious résumé, evaluated the applicant, and judged his suitability for jobs. The results revealed that Asian American individuals were evaluated highly for high-status jobs, regardless of their résumé quality. White and Hispanic applicants both benefited from a high-quality résumé, but Black applicants were evaluated negatively, even with strong credentials. Results of mediation analyses demonstrated that occupational stereotypes accounted for the relationship between race and evaluations of applicants. [Abstract from author].

Kite, M. E. & Johnson, B.T. (1988). Attitudes toward older and younger adults: A meta-analysis. *Psychology and Aging, 3*, 233-244.

Attitudes toward the elderly have been examined in a number of empirical studies, yet the question of whether the elderly are viewed more negatively than younger persons has not been resolved. A meta-analysis of the literature was conducted to examine this question; results demonstrated that attitudes toward the elderly are more negative than attitudes toward

younger people. However, smaller differences between the evaluations of elderly and younger targets were found when (a) the study used measures of personality traits (compared with measures of competence), (b) there were a larger number of dependent measures included in the effect size, (c) specific information was provided about the target person (compared with when a general target such as old person was used), and (d) a between-subjects design (compared with a within-subjects design) was used. These results support Lutsky's (1981) conclusion that age, in and of itself, seems to be less important in determining attitudes toward the elderly than other types of information. The methodological limitations within the literature and a need to consider multiple components of attitudes toward older individuals are discussed. [Abstract from author].

Leggon, C. (2010). Diversifying science and engineering faculties: Intersections of race, ethnicity, and gender. *American Behavioral Scientist, 53*(7), 1013-1028.

The fields of science, technology, engineering, and mathematics (STEM) drive economies worldwide. In such knowledge-based economies, no nation can afford to use its human resources inefficiently and ineffectively. Faculties exert a great deal of influence on the science and engineering (S&E) enterprise insofar as they conduct cutting-edge research as well as educate and train the S&E labor forces. This article focuses on the dynamics of the intersections of race/ethnicity and gender on diversifying S&E faculties in colleges and universities in the United States, and the criticality of disaggregating data to better understand these dynamics. Failure to disaggregate race/ethnicity data by gender, and gender data by race/ethnicity, masks important distinctions among groups. Failure to systematically take into account these distinctions results in policy, programs, practices, and institutions that are both inefficient and ineffective in developing and enhancing the S&E labor forces. [Abstract from author].

Lerner, J. S. & Tetlock, P.E. (1999). Accounting for the effects of accountability. *Psychological Bulletin,125*(2), 255-275.

This article reviews the now extensive research literature addressing the impact of accountability on a wide range of social judgments and choices. It focuses on 4 issues: (a) What impact do various accountability ground rules have on thoughts, feelings, and action? (b) Under what conditions will accountability attenuate, have no effect on, or amplify cognitive biases? (c) Does accountability alter how people think or merely what people say they think? and (d) What goals do accountable decision makers seek to achieve? In addition, this review explores the broader implications of accountability research. It highlights the utility of treating thought as a process of internalized dialogue; the importance of documenting social and institutional boundary conditions on putative cognitive biases; and the potential to craft empirical answers to such applied problems as how to structure accountability relationships in organizations. [Abstract from author].

Madera, J.M., Hebl, M.R., & Martin, R.C. (2009). Gender and letters of recommendation for academia: Agentic and communal differences. *Journal of Applied Psychology, 94*(6), 1591-1599.

In 2 studies that draw from the social role theory of sex differences (A. H. Eagly, W. Wood, & A. B. Diekman, 2000), the authors investigated differences in agentic and communal characteristics in letters of recommendation for men and women for academic positions and whether such differences influenced selection decisions in academia. The results supported the hypotheses, indicating (a) that women were described as more communal and less agentic than men (Study 1) and (b) that communal characteristics have a negative relationship with hiring decisions in academia that are based on letters of recommendation (Study 2). Such results are particularly important because letters of recommendation continue to be heavily weighted and commonly used selection tools (R. D. Arvey & T. E. Campion, 1982; R. M. Guion, 1998), particularly in academia (E. P. Sheehan, T. M. McDevitt, & H. C. Ross, 1998). [Abstract from authors].

Mahoney, M.R., Wilson, E., Odom, K.L., Flowers, L., & Adler, S.R. (2008). Minority faculty voices on diversity in academic medicine: perspectives from one school. *Academic Medicine, 83,* 781-786.

Purpose: To examine the perceptions and experiences of ethnic minority faculty at University of California-San Francisco regarding racial and ethnic diversity in academic medicine, in light of a constitutional measure outlawing race- and gender-based affirmative action programs by public universities in California. Method: In 2005, underrepresented minority faculty in the School of Medicine at University of California-San Francisco were individually interviewed to explore three topics: participants' experiences as minorities, perspectives on diversity and discrimination in academic medicine, and recommendations for improvement. Interviews were tape-recorded, transcribed verbatim, and subsequently coded using principles of qualitative, text-based analysis in a four-stage review process. Results: Thirty-six minority faculty (15 assistant professors, 11 associate professors, and 10 full professors) participated, representing diversity across specialties, faculty rank, gender, and race/ethnicity. Seventeen were African American, 16 were Latino, and 3 were Asian. Twenty participants were women. Investigators identified four major themes: (1) choosing to participate in diversity-related activities, driven by personal commitment and institutional pressure, (2) the gap between intention and implementation of institutional efforts to increase diversity, (3) detecting and reacting to discrimination, and (4) a need for a multifaceted approach to mentorship, given few available minority mentors. CONCLUSIONS: Minority faculty are an excellent resource for identifying strategies to improve diversity in academic medicine. Participants emphasized the strong association between effective mentorship and career satisfaction, and many delineated unique mentoring needs of minority faculty that persist throughout academic ranks. Findings have direct application to future institutional policies in recruitment and retention of underrepresented minority faculty.

Martell, R.F. (1991). Sex bias at work: The effects of attentional and memory demands on performance ratings of men and women. *Journal of Applied Social Psychology, 21*(23), 1939-1960.

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Examined the impact of attentional and memory demands on work performance ratings accorded men and women in traditionally male jobs. 77 male and 125 female college students read a vignette depicting the work behavior of a male or female police officer and then rated the individual's work performance. The attentional demands imposed on subjects while reading the vignette and the amount of time elapsed prior to issuing the performance ratings were systematically varied. As predicted, men were evaluated more favorably than women when raters were faced with an additional task requiring attention and time pressures were made salient. Only when subjects were able to carefully allocate all of their attentional resources did sex bias in work performance ratings abate. Gender-related work characterizations paralleled the performance ratings, providing support for the idea that sex stereotypes mediate discrimination in performance appraisal judgments. [Abstract from author].

Martell, R. F. & Guzzo,R.A. (1991). The dynamics of implicit theories of group performance: When and how do they operate? *Organizational Behavior and Human Decision Processes, 50*(1), 51-74.

221 undergraduates observed a task performing group and then were given positive, negative, or no performance feedback. Immediately after or 1 wk later, Ss completed an evaluative rating scale and a questionnaire measuring their recollections of the group's effective and ineffective behavior. Evaluative ratings and behavioral recollections were distorted by performance cues. However, contrary to predictions, only in immediate rating conditions were recollections of ineffective behavior affected. Distorted recollections of the group's behavior appeared to be the result of a systematic response bias in which observers adopted a more liberal decision criterion when judging the occurrence of expected behaviors. [Abstract from author].

Martell, R. F. & Lane, D.M. (1996). Male-female differences: A computer simulation. *American Psychologist,* 157-158.

Presents information on how male and female differences in performance ratings look with the use of computer simulation. Demonstrates how even a slight amount of bias (1%) toward men in promotion can reduce the proportion of women at the upper levels of an organization to 35%.

McNeely, C.L., Vlaicu, S. (2010). STEM women in the academic workforce: The impact of the socio-legal environment on institutional characteristics and faculty diversity. Paper presented at the annual meeting of *The Law and Society Association*, **Renaissance Chicago Hotel, Chicago, IL. Retrieved from http://www.allacademic.com/meta/p407713_index.html.**

In today's global economy, science, technology, engineering, and mathematics (STEM) education and the related workforce have been recognized as playing a crucial role in attaining or ensuring a country's competitive advantage. In the U.S., as elsewhere, developing a vibrant STEM workforce and maximizing its potential remain a critical and highly complex policy issue.

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Central to a variety of related debates and controversies is the relative lack of diversity in the academic workforce -- irrespective of anti-discrimination legislation and policy initiatives aimed at redressing this imbalance in higher education. Thus, for example, despite dramatic increases in the numbers of women obtaining advanced STEM degrees, evidence indicates that qualified women have not entered nor risen in the ranks of the professoriate to the degree or as fast as expected. Moreover, reflecting the "double bind" of intersectionality, women of color are virtually nonexistent in this population. Based on in-depth information collected from 114 research universities, we analyze longitudinal data on pertinent legislative actions and case law relative to university policies, institutional structures, and other characteristics, along with measures of university prestige and leadership buy-in. We discuss how these factors could be construed as promoting or hindering recruitment, hiring, retention, and advancement of women and other underrepresented groups in STEM fields. Employing a variant of the Simpson's Diversity Index to identify institutions with a more diverse professoriate, we explore potential effects of the socio-legal environment on faculty demographic profiles in light of institutional characteristics, structures, and policies. [Abstract from authors].

McNeely, C.L., Vlaicu, S. (2010). Exploring institutional hiring trends of women in the U.S. STEM professoriate. *Review of Policy Research,* **27(6): 781-793.**

The presence of women in the United States science and technology professoriate depends on various factors, including the availability of a pool of qualified women with relevant doctorates and the elimination of policy constraints and institutional barriers to professional access. Recognizing that initial hiring in related science, technology, engineering, and mathematics (STEM) fields is a crucial step affecting gender composition and representation at all levels in the academic hierarchy, we focus on hiring profiles in institutions of higher learning to examine related trends and practices. In addition to the significant and inversely proportional influence of initial hiring on future trends, differences were noted relative to public or private control of the university and other institutional characteristics, providing a basis for further analyses of institutional dynamics restricting or enhancing favorable hiring policies and practices for STEM women faculty. [Abstract from authors].

Moskowitz, G. B., Gollwitzer, P.M., Wasel , W., & Schaal, B. (1999). Preconscious control of stereotype activation through chronic egalitarian goals. *Journal of Personality and Social Psychology, 77,* **167-184.**

This research shows stereotype activation is controlled by chronic egalitarian goals. In the first 2 studies it was found that the stereotype of women is equally available to individuals with and without chronic goals, and the discriminant validity of the concept of egalitarian goals was established. In the next 2 experiments, differences in stereotype activation as a function of this individual difference were found. In Study 3, participants read attributes following stereotypical primes. Facilitated response times to stereotypical attributes were found for nonchronics but

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not for chronics. This lack of facilitation occurred at stimulus onset asynchronies (SOAs) where effortful correction processes could not operate, demonstrating preconscious control of stereotype activation due to chronic goals. In Study 4, inhibition of the stereotype was found at an SOA where effortful processes of stereotype suppression could not operate. The data reveal that goals are activated and used preconsciously to prevent stereotype activation, demonstrating both the controllability of stereotype activation and the implicit role of goals in cognitive control. [Abstract from author].

Nelson, D.J. (2005). A national analysis of diversity in science and engineering faculties at research universities. Retrieved from:
http://cheminfo.chem.ou.edu/~djn/diversity/briefings/Diversity%20Report%20Final.pdf

The first national and most comprehensive analysis to date of tenured and tenure track faculty in the "top 50" departments of science and engineering disciplines.

Nelson, T. E., Biernat, M.R., & Manis, M. (1990). Everyday base rates (sex stereotypes): Potent and resilient. *Journal of Personality and Social Psychology ,59*(4), 664-675.

Undergraduate subjects studied photographs of students and estimated the heights of the pictured models. Contrary to reports of base-rate neglect, sex stereotypes regarding height (the implicit recognition that men are normally taller than women) significantly affected these estimates, even when the targets' actual height was statistically controlled. Base rates were especially influential when information about targets was ambiguous, that is when targets were pictured seated. These base-rate effects were robust, remaining significant and substantial despite efforts to lessen their magnitude. Attempts to reduce base-rate effects by encouraging subjects to strive for accuracy, discouraging their reliance on the target's sex (as a cue), or offering cash rewards for accuracy did not succeed. Informing subjects that for the sample to be judged, sex would not predict targets' heights attenuated the base-rate effect, although it remained highly significant. [Abstract from author].

Norton, M. I., Vandello, J.A., & Darley, J.M. (2004). Casuistry and social category bias. *Journal of Personality and Social Psychology, 87*(6), 817-831.

This research explored cases where people are drawn to make judgments between individuals based on questionable criteria, in particular those individuals' social group memberships. We suggest that individuals engage in casuistry to mask biased decision making, by recruiting more acceptable criteria to justify such decisions. We present 6 studies that demonstrate how casuistry licenses people to judge on the basis of social category information but appear unbiased-to both others and themselves-while doing so. In 2 domains (employment and college admissions decisions), with 2 social categories (gender and race), and with 2 motivations (favoring an in-group or out-group), the present studies explored how participants justify

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decisions biased by social category information by arbitrarily inflating the relative value of their preferred candidates' qualifications over those of competitors. [Abstract from author].

Nosek, B. A., Smytha, F. L., Srirama, N., Lindnera, N. M., Devosb, T., Ayalac, A., Bar-Anana,Y., Berghd, R., Caie, H., Gonsalkoralef, K., Kesebira, S., Maliszewskig, N., Netoh, F., Ollii, E., Parkj, J., Schnabelk, K., Shiomural, K., Tulburem, B. T. T., Wiersn, R. W., Somogyio, M., Akramid, N., Ekehammard, B., Vianellop, M., Banajiq, M.R., & Greenwaldr, A.G. (2009). National differences in gender–science stereotypes predict national sex differences in science and math achievement. *PNAS, 106*(6), 10593-10597.

About 70% of more than half a million Implicit Association Tests completed by citizens of 34 countries revealed expected implicit stereotypes associating science with males more than with females. We discovered that nation-level implicit stereotypes predicted nation-level sex differences in 8th-grade science and mathematics achievement. Self-reported stereotypes did not provide additional predictive validity of the achievement gap. We suggest that implicit stereotypes and sex differences in science participation and performance are mutually reinforcing, contributing to the persistent gender gap in science engagement. [Abstract from author].
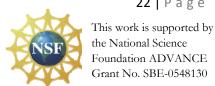
Onwuachi-Willig, A. (2010-05-27). "Complimentary and Complementary Discrimination in Faculty Hiring." Paper presented at the annual meeting of *The Law and Society Association,* Renaissance Chicago Hotel, Chicago, IL. Retrieved from http://www.allacademic.com/meta/p405381_index.html.

This talk focuses on one form of discrimination in faculty hiring. Specifically, this talk concentrates on discrimination against the "overqualified" minority faculty candidate, the candidate who is presumed to have too many opportunities and thus gets excluded from faculty interview lists and consideration. In so doing, this talk poses and answers the question: "Can exclusion from interviewing pools and selection based upon the notion that one is just 'too good' to recruit to a particular department constitute an actionable form of discrimination?" It then expresses and details the need for and importance of increasing diversity on college and university faculties in today's society and the importance of carefully evaluating one's own biases when creating and serving on faculty search committees. [Abstract from author].

Paludi, M.A. & Bauer, W.D. (1983). Goldberg revisited: What's in an author's name. *Sex Roles, 9*(3), 387-390.

The present research was a replication and extension of Goldberg's 1968 study of performance evaluation. 360 college students (180 male; 180 female) were asked to evaluate an academic article in the fields of politics, psychology of women or education (judged masculine, feminine, and neutral, respectively) that was written either by a male, female, or an author whose name was initialized. Results indicated that the articles were differentially perceived and evaluated

according to the name of the author. An article written by a male was evaluated more favorably than if the author was not male. Subjects' bias against women was stronger when they believed the author with the initialized name was female. Portions of this article were presented at the Sixth Annual Conference on Research on Women and Education, Pacific Grove, California, December 1980. [Abstract from author].
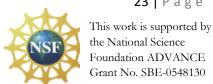
Pearson, A.R., Dovidio, J.F., Gaertner, S.L. (2009). The nature of contemporary prejudice: Insights from aversive racism. *Social and Personality Psychology Compass, 3*(3), 314-338.

Within the United States, declines in the overt expression of racial prejudice over several decades have given way to near universal endorsement of the principles of racial equality as a core cultural value. Yet, evidence of persistent and substantial disparities between Blacks and Whites remain. Here, we review research that demonstrates how the actions of even well-intentioned and ostensibly non-prejudiced individuals can inadvertently contribute to these disparities through subtle biases in decision making and social interactions. We argue that current racial attitudes of Whites toward Blacks in the United States are fundamentally ambivalent, characterized by a widespread contemporary form of racial prejudice, aversive racism, that is manifested in subtle and indirect ways, and illustrate its operation across a wide range of settings, from employment and legal decisions, to group problem-solving and everyday helping behavior. We conclude by describing research aimed at combating these biases and identify new avenues for future research. [Abstract from authors].

Pilcher, E.S., Kilpatrick, A.O., & Segars, J. (2009). An assessment of promotion and tenure requirements at dental schools. *Journal of Dental Education, 73,* 375-382.

Tenure and promotion are integral parts of the academic environment; however, in this era of growing shortages of faculty, as the baby boomers retire and the majority of dentists choose private practice, recruitment and retention may be affected by the way institutions handle promotion and tenure. A national survey of U.S. dental schools conducted in 2007 assessed the existence of multiple employment tracks for faculty and examined the requirements for promotion and tenure. All responding schools reported the existence of multiple tracks for academic faculty appointments. Many dental schools reported that they provided opportunity for faculty members to switch from one track to another, thus circumventing the traditional "up-or-out" policy. The number of schools offering non-tenure appointment tracks has also increased. This finding indicates an apparent increase over time in flexibility regarding tracks and tenure. The majority of schools did not report requirements for the number of publications necessary for promotion. Those that did report requirements showed an increase in expected scholarly activity relative to past studies, indicating that it may be more difficult than ever to achieve promotion.

Porter, N., Geis, F.L. & Jennings (Walstedt), J. (1983). Are women invisible as leaders? *Sex Roles, 9*(10), **1035-1049.**

This study shows that women are unlikely to be seen as leaders. Subjects (n=448) rated each member of a five-person group (shown in a photograph) on leadership attributes and also chose one of the five as contributing most to the group. Eight different stimulus slides were used. In two slides the head-of-the-table cue to group leadership was pitted against sex-role stereotypes. A man seated at the head of the table in a mixed-sex group was clearly seen as leader of his group, but a woman occupying the same position was ignored. The head-of-the-table cue identified women as leaders only in all-female stimulus groups. The data were consistent with the hypotheses that sex stereotypes still control social judgments, and that discrimination operates nonconsciously and in spite of good intentions. The authors are indebted to Marcia Halperin who read an early draft of this report and contributed substantially to the organization and exposition of the present version. [Abstract from author].
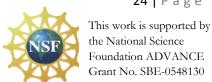
Powell, G. N., Butterfield, D. A., & Parent, J. D. (2002). Gender and managerial stereotypes: Have the times changed? *Journal of Management, 28,* **177–193.**

There has been a considerable increase in the proportion of women managers in recent years, from 21% in 1976 to 46% in 1999, and a call for "feminine leadership" to capitalize on this increase. The present study examines whether there has been a corresponding change in men's and women's stereotypes of managers such that less emphasis is placed on managers' possessing masculine characteristics. Data from 348 undergraduate and part-time graduate business students indicate that although managerial stereotypes place less emphasis on masculine characteristics than in earlier studies [Academy of Management Journal 22 (1979) 395; Group and Organization Studies 14 (2) (1989) 216], a good manager is still perceived as predominantly masculine.

Reskin, B.F. (2000). The proximate causes of employment discrimination. *Contemporary Sociology, 29*(2), **319-328.**

The study of inequality has long been a priority for sociologists. Unfortunately, the customary methods used to study workplace discrimination have done little to diminish gender & racial inequities. If this predicament is to be adequately addressed, sociologists must pay more attention to the manner in which inequality is propagated. Social psychological findings will prove useful in determining the causes of workplace discrimination. Attention should also be given to both nonconscious cognitive processes & conscious actions motivated by stereotypes, biases, ignorance, & in-group favoritism - actions that contribute to the continuation of workplace discrimination. Only when workplace discrimination is properly theorized can its effects be eliminated. The development of strategies to reduce workplace discrimination should be given greater precedence. [Abstract from author].

Ridgeway, C.L. (2001). Gender, status, and leadership. *Journal of Social Issues, 57*(4), 637-655.

More than a trait of individuals, gender is an institutionalized system of social practices. The gender system is deeply entwined with social hierarchy and leadership because gender stereotypes contain status beliefs that associate greater status worthiness and competence with men than women. This review uses expectation states theory to describe how gender status beliefs create a network of constraining expectations and interpersonal reactions that is a major cause of the "glass ceiling." In mixed-sex or gender-relevant contexts, gender status beliefs shape men's and women's assertiveness, the attention and evaluation their performances receive, ability attributed to them on the basis of performance, the influence they achieve, and the likelihood that they emerge as leaders. Gender status beliefs also create legitimacy reactions that penalize assertive women leaders for violating the expected status order and reduce their ability to gain compliance with directives.
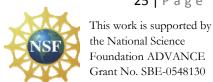
Robbins, T. L. & Denisi, A.S. (1993). Moderators of sex bias in the performance appraisal process: A cognitive analysis. *Journal of Management,19*(1), 113-126.

The present study was designed to analyze cognitive characteristics and situational moderators associated with sex bias in performance appraisal. The results of this study suggest that sex bias does not emerge as an influential factor during rater recall. Ratees performing in sex-incongruent occupations were found to receive deflated ratings in situations where their gender was not distinct within the group of ratees to be evaluated. Interpretations, limitations, implications, and directions for future research are discussed. [Abstract from author].

Rudd, E., Picciano, J., Nerad, M., & Cerny, J. (2010). The influence of postdoctoral training on prestige and time in academic careers: Findings from PhD's—ten years later, a national survey of PhD careers. *Center for Innovation and Research in Graduate Education*. **University of Washington.**

We know that graduates of prestigious PhD programs are more likely than others to become professors at research universities and in top tier (based on NRC rankings) departments. Yet increasingly a postdoctoral appointment is necessary and the influence of the postdoc on faculty careers is unstudied. This report investigates the influence of the postdoc on chances that PhD recipients will become a professor in the U.S., at a research university, and in a top tier department based on analysis of 10-15 years of post-PhD career path data collected from a sample of more than 600 biochemists and 700 mathematicians. Part I examines the influence of postdoctoral training on the prestige of faculty positions held at the time of the survey. Specific questions include: do graduates of lower quality tier PhD programs increase their chances of attaining faculty positions at research universities or in a top tier department with a top quality tier postdoc? Analysis shows that a top tier postdoc was nearly mandatory for gaining a faculty position at a research university in both biochemistry and mathematics. However, top tier postdoc training does not often overcome a lower tier PhD and bump a graduate up to a faculty

position above the quality tier of his or her PhD. In biochemistry, graduates of lower tier PhD programs increased chances of holding a faculty position at a research university by getting an MD. Graduates of top tier PhD programs were more likely than holders of lower tier PhDs to go on to a top tier postdoc and, moreover, those who did top tier postdocs were also more likely to go on to faculty positions in research universities when they also held a top tier PhD than when they earned their PhD in a lower tier program. Part 2 examines the impact of various factors, including postdoc quality tier, on *time* to faculty appointment. Findings largely corroborate analyses of Part I. In addition, Part 2 examines the relationship between time spent in postdocs and ever holding a tenured faculty position and concludes that biochemists do not get "credit" towards time to tenure for years spent in postdocs, but that years spent in postdocs shorten the amount of time mathematicians ultimately spend on tenure track. [Abstract from authors].

Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues, 57,* 743–762.

In an experiment, job description and applicants' attributes were examined as moderators of the backlash effect, the negative evaluation of agentic women for violating prescriptions of feminine niceness (Rudman, 1998). Rutgers University students made hiring decisions for a masculine or "feminized" managerial job. Applicants were presented as either agentic or androgynous. Replicating Rudman and Glick (1999), a feminized job description promoted hiring discrimination against an agentic female because she was perceived as insufficiently nice. Unique to the present research, this perception was related to participants' possession of an implicit (but not explicit) agency-communality stereotype. By contrast, androgynous female applicants were not discriminated against. The findings suggest that the prescription for female niceness is an implicit belief that penalizes women unless they temper their agency with niceness.

Ryan, M.K. & Haslam, R.S. (2005). The glass cliff: Evidence that women are over-represented in precarious leadership positions. *British Journal of Management,16*(2), 81-90.

There has been much research and conjecture concerning the barriers women face in trying to climb the corporate ladder, with evidence suggesting that they typically confront a 'glass ceiling' while men are more likely to benefit from a 'glass escalator'. But what happens when women do achieve leadership roles? And what sorts of positions are they given? This paper argues that while women are now achieving more high profile positions, they are more likely than men to find themselves on a 'glass cliff', such that their positions are risky or precarious. This hypothesis was investigated in an archival study examining the performance of FTSE 100 companies before and after the appointment of a male or female board member. The study revealed that during a period of overall stock-market decline those companies who appointed women to their boards were more likely to have experienced consistently bad performance in the preceding five months than those who appointed men. These results expose an additional, largely invisible, hurdle that women need to overcome in the workplace. Implications for the evaluation of

women leaders are discussed and directions for future research are outlined.[Abstract from author].

Sackett, P.R., DuBois, C.L.Z., & Noe, A.W. (1991). Tokenism in performance evaluation: The effects of work group representation on male–female and white–black differences in performance ratings. *Journal of Applied Psychology,76*(2), 263-267.

Male–female differences in performance ratings were examined in 486 work groups across a wide variety of jobs and organizations. As suggested by the sex stereotyping literature, women received lower ratings when the proportion of women in the group was small, even after male–female cognitive ability, psychomotor ability, education, and experience differences were controlled. Replication of the analyses with racial differences (White–Black) in 814 work groups demonstrated that group composition had little effect on performance ratings. The effects of group composition on stereotyping behaviors do not appear to generalize to all minority contexts. [Abstract from author].
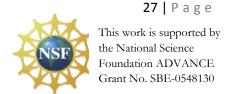
Schmader, T., Whitehead, J.,& Wysocki, V.H. (2007). A linguistic comparison of letters of recommendation for male and female chemistry and biochemistry job applicants at the University of Arizona. *Sex Roles, 57*, 509-514.

In the current study, text analysis software was used to examine 886 letters of recommendation written on behalf of 235 male and 42 female applicants for either a chemistry or biochemistry faculty position at a large U.S. research university. Results revealed more similarities than differences in letters written for male and female candidates. However, recommenders used significantly more standout adjectives to describe male as compared to female candidates. Letters containing more standout words also included more ability words and fewer grindstone words. Research is needed to explore how differences in language use affect perceivers' evaluations of female candidates.

Sheridan, J. T., Fine, E., Pribbenow, C. M., Handelsman, J., & Carnes, M. (2010). Searching for excellence & diversity: Increasing the hiring of women faculty at one academic medical center. *Academic Medicine, 85*(6), 999-1007. doi:10.1097/ACM.0b013e3181dbf75a

One opportunity to realize the diversity goals of academic health centers comes at the time of hiring new faculty. To improve the effectiveness of search committees in increasing the gender diversity of faculty hires, the authors created and implemented a training workshop for faculty search committees designed to improve the hiring process and increase the diversity of faculty hires at the University of Wisconsin–Madison. They describe the workshops, which they presented in the School of Medicine and Public Health between 2004 and 2007, and they compare the subsequent hiring of women faculty in participating and nonparticipating departments and the self-reported experience of new faculty within the hiring process. Attendance at the workshop correlates with improved hiring of women faculty and with a better hiring experience for faculty recruits, especially women. The authors articulate successful

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elements of workshop implementation for other medical schools seeking to increase gender diversity on their faculties [Abstract from authors].

Shields, S. A., Zawadzki, M. J., & Johnson, R. N. (2011). The impact of the workshop activity for gender equity simulation in the academy (WAGES–Academic) in demonstrating cumulative effects of gender bias. *Journal of Diversity in Higher Education*, *4*(2), 120-129. doi:10.1037/a0022953

We report experimental evaluation of the Workshop Activity for Gender Equity Simulation in the Academy (WAGES–Academic), a brief, experiential simulation of the cumulative effects of unconscious bias in the academic workplace. We predicted that participants who played WAGES–Academic would demonstrate significantly increased knowledge and retention of gender equity issues in the academic workplace compared with participants in a control condition. Baseline information on general knowledge of workplace gender equity issues was obtained from 1,254 undergraduates. In the second phase, 144 were randomly assigned to complete either WAGES–Academic or a control task, and the immediate effects of the activities were measured. Participants were contacted 7–11 days later to complete an online measure of knowledge retention. Compared with a control condition, WAGES–Academic increased knowledge and retention. This effect occurred irrespective of prior level of sexist beliefs, participant gender, or whether the participant had been on the advantaged or disadvantaged team. Potential use and testing of WAGES–Academic with university faculty and administrators are discussed [Abstract from authors].

Skrypnek, B.J. & Snyder, M. (1982). On the self-perpetuating nature of stereotypes about women and men. *Journal of Experimental Social Psychology, 18*(3), 277-291.

122 male-female pairs of unacquainted undergraduates interacted to negotiate a division of labor on a series of worklike tasks (that differed in their sex-role connotations) in a situation that permitted control over the information that male perceivers received about the apparent sex of female targets. The perceivers' beliefs about the sex of their targets initiated a chain of events that resulted in targets providing behavioral information for perceivers' beliefs about their sex. Although this behavioral confirmation effect was initially elicited as reactions to overtures made by perceivers, it persevered so that eventually targets came to initiate behaviors "appropriate" to the sex with which they had been labeled by perceivers. The specific roles of perceivers and targets in the behavioral confirmation process are examined. [Abstract from author].

Steinpreis, R., 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.

To determine factors that influence outside reviewers & search committee members when they are reviewing curricula vitae, particularly with respect to the gender of the name on the vitae, 238 male & female academic psychologists sent one of four versions of a curriculum vitae (ie, female or male job applicant or tenure candidate), along with a questionnaire. Although an

exclusively between-groups design was used to avoid sparking gender-conscious responding, results indicate that participants were clearly able to distinguish between the qualifications of the job applicants vs the tenure candidates, as evidenced by suggesting higher starting salaries; increased likelihood of offering the tenure candidates a job; granting them tenure; & greater respect for their teaching, research, & service records. Both men & women were more likely to vote to hire a male vs a female job applicant with an identical record. Similarly, both sexes reported that the male job applicant had done adequate teaching, research, & service experience compared to the female job applicant with an identical record. In contrast, when men & women examined the highly competitive curriculum vitae of the real-life scientist who had gotten early tenure, they were equally likely to tenure the male & female tenure candidates, & there was no difference in their ratings of their teaching, research, & service experience. There was no significant main effect for the quality of the institution or professional rank on selectivity in hiring & tenuring decisions. Results indicate a gender bias for both men & women in preference for male job applicants. [Adapted from the source document].
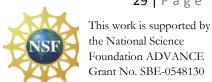
Tapia, R. (2010). Hiring and developing minority faculty at research universities. *Communications of the ACM*. **53(3), 33-35.**

Emphasizing the importance of minority at research universities, Tapia cautions against relying on Minority Serving Institutions (MSI) to produce minority doctorates for the U.S. Instead, he suggests faculty take a more active role in finding post-doctoral posts for their minority doctoral graduates, a re-examination of hiring criteria, and mentoring of young faculty by senior faculty. Though this advice could apply equally well to all new graduates, department heads, and senior faculty, Tapia argues that the effects of these behaviors affect minority scholars more than non-minorities.

Tetlock, P., Lerner, J. & Boetteger, R. (1996). The dilution effect: Judgmental bias, conversational convention, or a bit of both? *European Journal of Social Psychology,***26(6), 915-934.**

T his study explored competing normative interpretations of the dilution effect: the tendency for people to underutilize diagnostic evidence in prediction tasks when that evidence is accompanied by irrelevant information. From the normative vantage point of the intuitive statistician, the dilution effect is a judgmental bias that arises from the representativeness heuristic (similarity-matching of causes and effects). From the normative prospective of the intuitive politician, however, the dilution effect is a rational response to evidence presented in a setting in which Gricean norms of conversation are assumed to hold. The current experiment factorially manipulated conversational norms, the degree to which diagnostic evidence was diluted by irrelevant evidence, and the accountability of subjects for their judgments. Accountable subjects demonstrated a robust dilution effect when conversational norms were explicitly primed as well as in the no-priming control condition, but no dilution when

conversational norms were explicitly deactivated. Non-accountable subjects demonstrated the dilution effect across norm activation conditions, with the strongest effect under the activation of conversational norms. Although the results generally support the conversational-norm interpretation of dilution, the significant dilution effect among non-accountable subjects in the norm-deactivated condition is more consistent with the judgmental-bias interpretation. [Abstract from author].

Tetlock, P. (1985). Accountability: A social check on the fundamental attribution error. *Social Psychology Quarterly, 48*(3), 227-236.

Previous attitude-attribution studies indicate that people are often quick to draw conclusions about the attitudes and personalities of others-even when plausible external or situational causes for behavior exist (an effect known as the overattribution effect or fundamental attribution error). This experiment explores whether accountability--pressures to justify one's causal interpretations of behavior to others--reduces or eliminates this bias. Subjects were exposed to an essay that supported or opposed affirmative action. They were informed that the essay writer had freely chosen or had been assigned the position he took. Finally, subjects either did not expect to justify their impressions of the essay writer or expected to justify their impressions either before or after exposure to the stimulus information. The results replicated previous findings when subjects did not feel accountable for their impressions of the essay writer or learned of being accountable only after viewing the stimulus information. Subjects attributed essay-consistent attitudes to the writer even when the writer had been assigned the task of advocating a particular position. Subjects were, however, significantly more sensitive to situational determinants of the essay writer's behavior when they felt accountable for their impressions prior to viewing the stimulus information. The results suggest that accountability eliminated the overattribution effect by affecting how subjects initially encoded and analyzed stimulus information. [Abstract from author].

Tetlock, P. (1983). Accountability and the perseverance of first impressions. *Social Psychology Quarterly,46*(4), 285-292.

Previous research indicates that our initial impressions of events frequently influence how we interpret later information. This experiment explored whether accountability-pressures to justify one's impressions to others-leads people to process information more vigilantly and, as a result, reduces the undue influence of early-formed impressions on final judgments. Subjects viewed evidence from a criminal case and then assessed the guilt of the defendant. The study varied(1) the order of presentation of pro-vs. anti-defendant information, (2) whether subjects expected to justify their decisions and, if so, whether subjects realized that they were accountable prior to or only after viewing the evidence. The results indicated that subjects given the anti/pro-defendant order of information were more likely to perceive the defendant as

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guilty than subjects given the pro/anti-defendant order of information, but only when subjects did not expect to justify their decisions or expected to justify their decisions only after viewing the evidence. Order of presentation of evidence had no impact when subjects expected to justify their decisions before viewing the evidence. Accountability prior to the evidence also substantially improved free recall of the case material. The results suggest that accountability reduces primacy effects by affecting how people initially encode and process stimulus information. [Abstract from author].
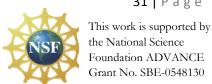
Thomas-Hunt, M. C. & Phillips, K.W. (2004). When what you know is not enough: Expertise and gender dynamics in task groups. *Personality and Social Psychology Bulletin*, **30**(12), 1585-1598.

This study investigates how the contribution, identification, and consideration of expertise within groups are affected by gender differences. The authors examined the effects of member expertise and gender on others' perceptions of expertise, actual and own perceptions of influence, and group performance on a decision-making task. The authors' findings are consistent with social role theory and expectation states theory. Women were less influential when they possessed expertise, and having expertise decreased how expert others perceived them to be. Conversely, having expertise was relatively positive for men. These differences were reflected in group performance, as groups with a female expert underperformed groups with a male expert. Thus, contrary to common expectations, possessing expertise did not ameliorate the gender effects often seen in workgroups. The findings are discussed in light of their implications for organizational workgroups in which contribution of expertise is critical to group performance. [Abstract from author].

Tinkler, J., Li, Y. & Mollborn, S. (2007). Can legal intervention change beliefs: The effect of exposure to sexual harassment policy on men's gender beliefs. *Social Psychology Quarterly, 70*(4), 480-494.

In spite of the relative success of equal opportunity laws on women's status in the workplace, we know little about the influence of such legal interventions on people's attitudes and beliefs. This paper focuses, in particular, on how sexual harassment policy affects men's beliefs about the gender hierarchy. We employ an experimental design in which we measure the effect of a policy intervention on men's explicit and implicit gender beliefs. Results show that the sexual harassment policy did not alter explicit gender beliefs. Explicit beliefs changed in a different way, however. Compared to the baseline condition, participants in the policy intervention condition believed that most people think both men and women are lower-status, less competent, and less considerate. The policy intervention also affected implicit gender beliefs. Participants in the policy condition displayed more entrenched male-advantaged gender beliefs compared to the baseline condition. We interpret this as evidence that sexual harassment policies may have the unintended effect of activating unequal gender beliefs, which run contrary

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to the policy's equalizing aims. This research also suggests the value of measuring both explicit and implicit gender beliefs. [Abstract from author].

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

This study examines over 500 letters of recommendation for medical faculty at a large American medical school in the mid-1990s, using methods from corpus and discourse analysis, with the theoretical perspective of gender schema from cognitive psychology. Letters written for female applicants were found to differ systematically from those written for male applicants in the extremes of length, in the percentages lacking in basic features, in the percentages with doubt raisers (an extended category of negative language, often associated with apparent commendation), and in frequency of mention of status terms. Further, the most common semantically grouped possessive phrases referring to female and male applicants ('her teaching,' 'his research') reinforce gender schema that tend to portray women as teachers and students, and men as researchers and professionals. [Abstract from author].

Trower, C. & Chait, R. (2002) Faculty diversity: Too little for too long. *Harvard Magazine.* **Retrieved from:** http://www.harvard-magazine.com/on-line/030218.html

Presents numbers on faculty diversity by institution type and faculty rank and offers suggestions for reform.

Valian,V. (1998). Running in place. *The Sciences,* 18-23.

Presents essays and comments on women by track and field, and the effects of sex stereotyping.

Valian, V. (1999). *Why so slow? The advancement of women.* **MIT Press.**

Why do so few women occupy positions of power and prestige? Virginia Valian uses concepts and data from psychology, sociology, economics, and biology to explain the disparity in the professional advancement of men and women. According to Valian, men and women alike have implicit hypotheses about gender differences—gender schemas—that create small sex differences in characteristics, behaviors, perceptions, and evaluations of men and women. Those small imbalances accumulate to advantage men and disadvantage women. The most important consequence of gender schemas for professional life is that men tend to be overrated and women underrated. Valian's goal is to make the invisible factors that retard women's progress visible, so that fair treatment of men and women will be possible. The book makes its case with experimental and observational data from laboratory and field studies of children and adults, and with statistical documentation on men and women in the professions. The many anecdotal examples throughout provide a lively counterpoint.

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Wenneras, C. & Wold, A. (1997.) Nepotism and sexism in peer-review. In *Women, science, and technology: a reader in feminist science studies.*Wyer, M. (Ed). Routledge, NY.

Looks at an analysis of peer-review scores for postdoctoral fellowship applications at the Swedish Medical Research Council (MRC) as of May 1997. Discusses the policy of secrecy in evaluation. Their study strongly suggests that peer reviewers cannot judge scientific merit independent of gender. The peer reviewers over-estimated male achievements and/or underestimated female performance, as shown by multiple-regression analyses of the relation between defined parameters of scientific productivity and competence scores.
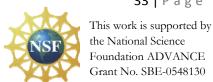
Wingard D.L., Reznik V.M., & Daley S.P. (2008). Career experiences and perceptions of underrepresented minority medical school faculty. *Journal of the National Medical Association, 100,* 1084-7.

BACKGROUND: Although studies have outlined the benefit of diversity in academic medicine, the number of underrepresented minority (URM) faculty remains low. In 1998, University of California, San Diego (UCSD) School of Medicine with the Hispanic Center of Excellence began a formalized proactive faculty development program. Over the past 10 years, recruitment and retention of URM junior faculty have increased. We undertook a study to explore factors associated with this improvement. METHODS: Semistructured interviews were conducted with 18 out of 26 URM and 12 out of 26 randomly chosen non-URM assistant and associate faculty members throughout 2005. Interview content, based on a conceptual framework from Joanne Moody, included career path, knowledge and experience with faculty development programs and perceived faculty standing. RESULTS: URM faculty were more likely than majority faculty (44% vs. 8%, p = 0.04) to mention the importance of a role model in choosing their career path. URM faculty participated in faculty development programs at a higher rate than majority faculty (78% vs. 17%, p < 0.001), were more likely to find out about programs through personal contact (94% vs. 42%, p = 0.001) and reported more personal contacts prior to participation (78% vs. 33%, p = 0.02). URM faculty were older, graduated earlier and were more likely hired into a staff position prior to faculty appointment (61% vs. 17%, p = 0.02). CONCLUSIONS: Academic medical centers may find competitive URM candidates in staff positions and alternative faculty tracks within their institution. Informing URM faculty often and personally about opportunities for faculty development may increase their participation in career development programs and improve retention.

Wing Sue, D. (Ed.). (2010). *Microaggressions and marginality: Manifestation, dynamics, and impact*. New Jersey: John Wiley and Sons, Inc.

In the chapter entitled "Microagressions and the Pipeline for Scholars of Color" authors Guzman, Trevino, Lubuguin, and Aryan examine both the incentives for universities to diversify their doctoral and faculty populations (citing research by Milem, Chang, & Antonio, 2005) and the obstacles scholars encounter once they arrive at institutions whose members seem less than ready to work with them. Authors consider faculty recruitment, candidate selection, fit,

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contract negotiations, and all that follows as minority faculty attempt to acclimate to their departments.

Wright, A.L., Schwindt, L. A., Bassford, T.L., Reyna, V. F., Shisslak, C. M., St. Germain, P. A., & Reed, K. L. (2003). Gender differences in academic advancement: Patterns, causes, and potential solutions in one U.S. college of medicine. *Academic Medicine, 78,* **500-508.**

This study tested hypotheses about why gender disparities exist in salary, rank, track, leadership, and perceptions of campus climate at one academic center, the University of Arizona College of Medicine, Tucson. Salary, rank, and track data were obtained from institutional databases for the 1999–2000 fiscal year. A structured, online questionnaire was made available to 418 faculty members to collect information about their goals, attitudes, and experiences. A total of 198 faculty members completed the questionnaire. The data showed significant gender differences in faculty salaries, ranks, tracks, leadership positions, resources, and perceptions of academic climate. On average, women earned $12,777 or 11% less than men, after adjusting for rank, track, degree, specialty, years in rank, and administrative positions (p , .0003). Of female faculty, 62% were assistant professors (49% of women were non–tenure-eligible assistant professors), while 55% of male faculty were promoted and tenured. Almost a third of women reported being discriminated against, compared with only 5% of men (p , .00001). This data also reveals that women often want to take on leadership roles, but are not asked to do so. There were no gender differences in aspirations to be a leader, self assessment as having leadership qualities, willingness to take on time consuming tasks, and feelings of being undermined in a leadership role. However, fewer women are asked to serve as a committee chair, section head, or department head or to be involved in decisions about promotion and non-grant supported space. Substantial gender differences in the rewards and opportunities of academic medicine remain, that cannot be attributed to differences in productivity or commitment between women and men.

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