

Advancing Women: Annotated Bibliography

Virginia Valian

Department of Psychology

Hunter College and CUNY Graduate Center New York, NY

Sources of gender inequities

Gender schemas

Fiske, S. T. & Taylor, S. E. (1991). Social cognition. 2nd ed. NY: McGraw-Hill. Schemas are implicit, often nonconscious, hypotheses that we use to interpret social events. This book reviews many different kinds of schemas.

Valian, V. (1998). Why so slow? The advancement of women. Cambridge, MA: MIT Press. Chapters 6 and 7.

Our schemas about males and females directly include expectations about their professional competence and they bias our interpretation of actual performance. To oversimplify, we expect men to do well, and see men's actual performance in the rosy light of our positive expectations; men carry a small plus sign. Conversely, we expect women to do less well, and see their actual performance in the darker light of our negative expectations; women carry a small minus sign. Gender schemas are held by both males and females. The content of gender schemas is widely shared throughout a culture. Most experiments show no differences in the judgments males and females make. Schemas are cognitive in origin but have motivational and emotional consequences as well as consequences for judgments and evaluations.

Accumulation of advantage

Martell, R. F., Lane, D. M., & Emrich, C. (1996). Male-female differences: a computer simulation. American Psychologist, 51, 157-158.

A computer simulation of promotion practices at a hypothetical corporation provides a convincing demonstration of the cumulative effects of small-scale bias. The simulation "created" an organization with an 8-level hierarchy. It staffed each level of the hierarchy with equal numbers of men and women. The simulation assumed a certain percentage of incumbents would be promoted from one level to the next. Finally, it assumed a tiny bias in favor of promoting men, a bias that accounted only for 1% of the variability in promotion. The simulation then ran through a series of promotions. After repeated promotions, the highest level in the hierarchy ended up being 65% male. This scenario demonstrates that operating at a minute disadvantage can have substantial long-term effects.

Merton, R.K. (1948). The self-fulfilling prophecy. Antioch Review, 8, 193-210.

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

Merton originated the notion of the accumulation of advantage and disadvantage. Like interest on capital, advantages accrue; like interest on debt, disadvantages accrue. Very small differences in treatment can, as they accumulate, have major consequences in salary, promotion, and prestige. It is unfair to men and women to neglect small cases of group-based bias, because those small cases add up.

Barriers to perceiving gender inequity: belief in a just world; benevolent sexism; maintenance of self-esteem

Lerner, M. J. (1975). The justice motive in social behavior: an introduction. Journal of Social Issues, 31, 1-19.

People want to believe in a "just world" and will interpret data accordingly, failing to perceive contrary evidence. We see the rewarded as deserving and the deserving as rewarded.

Valian, V. (1998). Why so slow? The advancement of women. Cambridge, MA: MIT Press, Chapter 7.

If one wants to believe that advancement is determined by merit, as most people (especially those who are successful) do, the data available to us are easily interpreted in line with our hypothesis that the world is a "just world". In a just world bad things do not happen to good people, and good things do not happen to bad people. The fact that some women make it to the top is interpreted as showing that evaluations are basically fair and that truly able women will succeed. The fact that we have admired the competence of some women is interpreted as showing that we are free of gender bias, or at least free enough. It is hard for us to see that we are in error. We have the beliefs we do because we view ourselves as fair and impartial. That allows us to place in the background the rule of our behavior and put in the foreground the exceptions to it. We fail to see just how often the rule operates. It is hard to remember that an exception is just that: an atypical event.

Glick P. & Fiske, S. T. (2001). An ambivalent alliance: Hostile and benevolent sexism as complementary justifications for gender inequality. American Psychologist, 56, 109-118.

Glick, P., Fiske, S. F., Mladinic, A., et al. (2000). Beyond prejudice as simple antipathy: Hostile and benevolent sexism across cultures. Journal of Personality and Social Psychology, 79, 763-775.

Prejudice against women can be benevolent as well as hostile. Benevolent sexism includes the ideas that women should be cherished, protected, and financially provided for and that women are purer, more refined, and more moral. Men and women who endorse benevolent sexist attitudes also tend to endorse hostile sexist attitudes. Men's and women's attitudes are correlated. Nations with less gender equality show higher sexism scores. Because people can hold warm and apparently positive attitudes toward women, it is difficult for them to perceive the sexism latent within those benevolent attitudes.

Ruggiero, K. M. & Taylor, D. M. (1997). Why minority group members perceive or do not perceive the discrimination that confronts them: The role of self-esteem and perceived control. Journal of Personality and Social Psychology, 72, 373-389.

Ruggerio, K. M. & Marx, D. M. (1999). Less pain and more to gain: Why high-status group members blame their failure on discrimination. Journal of Personality and Social Psychology, 77, 774-784.

Valian, V. (1998). Why so slow? The advancement of women. Cambridge, MA: MIT Press. Chapter 8.

Feelings of lack of control and lack of personal effectiveness occur in attributions to discrimination. Because of their overall lower status, women can buffer such feelings less easily than men can and are less likely to appeal to discrimination as a reason for failure.

Choosing and developing leaders

Nonconscious evaluations of others - effects of gender schemas

Bargh, J. A. & Chartrand, T. L. (1999) The unbearable automaticity of being. American Psychologist, 54, 462-479.

Much of human perception occurs nonconsciously, rapidly, and automatically.

Biernat, M., Manis, M., & Nelson, T. (1991) Stereotypes and standards of judgment. Journal of Personality and Social Psychology, 66, 5-20.

College students were shown photographs of other students and were asked to estimate their height in feet and inches (including their footwear). The photos always contained a reference item, such as a desk or a doorway, so that height could be accurately estimated.

Unbeknownst to the students who were doing the estimating, the experimenters had matched the photographs so that for every photograph of a male student of a given height there was a female student of the same height. The student judges were affected by their knowledge that men are on average taller than women, so that when they were exposed to a sample contrary to the general rule, they judged the women as shorter than they really were, and the men as taller. There were no differences between female and male judges: both underestimated women's height and overestimated men's height. Judgments are influenced by gender schemas even when objective characteristics are being evaluated.

Perceptions of competence and professional ability - effects of gender schemas

Heilman, M. E., Block, C. J., Martell, R. F., & Simon, M. C. (1989). Has anything changed? current characterizations of men, women, and managers. Journal of Applied Psychology, 74, 935-942.

Male managers rated different groups of people on a series of adjectives. One group was asked to rate successful managers on 92 different characteristics, according to how typical of successful managers they thought that quality was. The characteristics ranged from "leadership ability" to "fearful". Most people rated successful managers as typically having high leadership ability and not fearful. A second group rated women in general, and a third group rated men in

general. Male managers rated men in general and successful managers as very similar, much more similar than they rated women in general and successful managers. Other groups of male managers rated female and male managers described as successful. Most differences in ratings of men and women disappeared, but even successful women managers were perceived as having less leadership ability than successful men managers. Furthermore, women managers were seen as having negative qualities that men managers did not have, such as being bitter, quarrelsome, and selfish.

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, 48-59.

Both women and men - nonconsciously but visibly - react negatively to women in a situation which is aimed at finding a group solution to a problem. People respond especially negatively to women's attempts to be assertive. Females trained to act as leaders received more negative facial reactions than positive ones. The trained males, in contrast, always received more positive reactions than negative ones.

Eagly, A. H., Karau, S. J., & Makhijani, M. G. (1995). Gender and the effectiveness of leaders: a meta-analysis. Journal of Personality and Social Psychology, 117, 125-145.

This meta-analysis of studies which concentrated on evaluations of women as leaders suggests that women are particularly disadvantaged when their style of leading is masculine. Having a style that is assertive to the point of appearing autocratic, rather than cooperative and participative, is especially costly for a woman. When experiments investigated the effects of autocratic leaders - leaders who told people what to do without consulting them - women were especially negatively evaluated. A highly assertive style is incongruent with our conception of women and women are penalized if they adopt such a style. There are no differences between males and females in their judgments.

Heilman, M. E. & Stopeck, M. H. (1985). Attractiveness and corporate success: different causal attributions for males and females. Journal of Applied Psychology, 70, 379-388.

Attractiveness helps men appear more competent but makes women appear less competent. That is because attractiveness intensifies a person's gender. An attractive man is more of a man and hence more competent than an unattractive man. An attractive woman is more of a woman and hence less competent than an unattractive woman.

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, 386-395.

Women are judged more positively if they are more than 30% of the applicant pool than if they are 25% or less of the pool.

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, 263-267.

Women are judged more positively in work groups where they make up more than a third of the group.

Dovidio, J. F. & Gaertner, S. L. (2000). Aversive racism and selection decisions: 1989 and 1999. Psychological Science, 11, 315-319.

White students in 1999 reported less racial prejudice than did white students in 1989. Nevertheless, in both time periods, white students recommended blacks for a position as a peer counselor less often than they recommended whites when the targets had ambiguous qualifications. (When targets had clearly strong or clearly weak qualifications, white students recommended whites and blacks equally often.) Observers judged the qualifications of both races similarly, but gave whites the benefit of the doubt as far as recommending them for a position. Implications: good intentions are not enough; high-status targets are likely to be recommended over low-status targets when their qualifications are in the mid-range.

Women in academia - effects of gender schemas

Valian, V. (1998). Why so slow? The advancement of women. Cambridge, MA: MIT Press. Chapters 11 and 12.

Summary of data on women in science and humanities faculties in the US: salary, rank, tenure, productivity, and teaching.

Valian, V. (2001). Gender disparities in income and advancement across the professions. Unpublished handout, Hunter College - CUNY.

Figures from 1997 for academic scientists and engineers show slight disparities in tenure and tenure-track positions, as well as rank, even for people under age 35. Median annual salaries across all settings are lower for women than men at every age breakdown.

Ross, M. & Green, M. F. (1998). The American college president. Washington, DC: American Council on Education.

In 1995, women were 6 % of the presidents at private universities which grant the PhD but 25% of presidents of private two-year colleges, showing the common inverse relation between representation of women and prestige: women are more numerous at low-prestige institutions.

Nonnemaker, L. (2000). Women physicians in academic medicine. New England Journal of Medicine, 342, 399-405.

How many associate or full professors "should" there be, given the number of assistant or associate professors? Via cohort data of medical school graduates from 1979 to 1993, Nonnemaker shows that at both the associate and full level, more women would be expected than are present, even controlling for specialty. Income figures show advantages for women over men in pediatrics and family medicine; those advantages do not carry over to promotion where, in almost every specialty where there are enough numbers for a meaningful comparison, men are advantaged relative to women.

Fox, M. F. (1981). Sex, salary and achievement: reward-dualism in academia. Sociology of Education, 54, 71-84.

Fox, M. F. (1985). Publication, performance, and reward in science and scholarship. In J. Smart (Ed.), Higher education: handbook of theory and research (pp. 255-282). NY: Agathon.

Sonnert, G. & Holton, G. (1996a). Career patterns of women and men in the sciences. American Scientist, 84, 63-71.

Sonnert, G. & Holton, G. (1996b). Gender differences in science careers: the Project Access study. New Brunswick, NJ: Rutgers University Press.

Zuckerman, H. (1987). Persistence and change in the careers of men and women scientists and engineers: a review of current research. In L.S. Dixon (Ed.), Women: their underrepresentation and career differentials in science and engineering (pp. 123-156). Washington, DC: National Technical Information Service.

Women publish fewer articles than men do, but the average article by a woman is cited more often than the average article by a man. Women emphasize quality, men quantity.

Interventions to promote gender equity

What administrators can do - implications of laboratory data

Valian, V. (1998). Why so slow? The advancement of women. Cambridge, MA: MIT Press, Chapter 14.

This chapter summarizes data showing when erroneous judgments are most likely (little time, divided attention, low accountability), what types of reasoning errors are exacerbated when social groups are involved (failure to appreciate covariation, blocking, illusory correlation), how to improve reasoning about others, and how to use the authority of leaders to legitimate other leaders. Women, more often than men, lack information about what is required for career advancement, take on routine responsibilities which will not help their advancement, and get less mentoring from senior faculty.

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

People can learn to reduce their reliance on gender schemas, even if they cannot eliminate their gender bias entirely.

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.

People who are actively and strongly committed to egalitarian goals (being fair, tolerant, and open-minded) are less likely to be influenced by stereotypes. The article reviews other data showing that being aware of bias, being motivated to be unbiased, and having time and attention to devote to evaluations of others, reduces biased judgments even if a schema is activated.

Brown, V. & Geis, F. L. (1984). Turning lead into gold: leadership by men and women and the alchemy of social consensus. Journal of Personality and Social Psychology, 46, 811-824.

Geis, F. L., Boston, M. B., & Hoffman, N. (1985). Sex of authority role models and achievement by men and women: leadership performance and recognition. Journal of Personality and Social Psychology, 49, 636-653.

Geis, F. L., Brown, V., & Wolfe, C. (1990). Legitimizing the leader: endorsement by male versus female authority figures. Journal of Applied Social Psychology, 20, 943-970.

Leaders legitimize other leaders. Undergraduate evaluators watched a videotape in which five graduate students had a group discussion (Brown & Geis, 1984). On the tape, a faculty member introduced one of the students as the leader. In one version of the tape the faculty member vouched for the student's expertise, mentioning the student's theoretical knowledge and performance ability. In the other version the faculty member simply said the student would be the leader. The two videotapes were otherwise identical. After watching the video, the evaluators judged the student leader on a number of dimensions, including how much leadership the leader showed, how good the leader's contributions were, how desirable it would be to hire the leader, and how much salary the leader deserved. The leader scored higher on all those measures if the faculty member had vouched for the student's expertise. As usual, there was no difference in how male and female evaluators responded. The same effect occurred whether the student leader was male or female, and there was no difference in how positively male and female leaders were rated. The same effect occurred whether the faculty member was male or female. A credible authority figure can successfully legitimize others. Chief academic officers can create academic leaders of both sexes.

Kram, K. E. (1985). Mentoring at work: Developmental relationships in organizational life. Glenview, IL: Scott Foresman.

Mentors can directly help proteges' careers in 5 ways: sponsoring promotions; coaching for desired organizational behaviors; protecting against problems; providing challenges; and showcasing talents and abilities. Mentors can help proteges' personal goals in 4 ways: developing a sense of self as a professional; counseling; friendship; role modeling. Only limited tests for mentors' success in any of the 9 domains exist.

Ragins, B. R. & Cotton, J. L. (1999). Mentor functions and outcomes: A comparison of men and women in formal and informal mentoring relationships. Journal of Applied Psychology, 84, 529-550.

Compared to formal mentoring, informal mentoring is spontaneously initiated, lasts for 3-6 years, changes the amount, type, and purpose of contact over time, and may have more motivated and skilled mentors. A survey of 614 proteges in male-, female-, and non-biased occupations compared the effectiveness of formal and informal mentoring. Proteges in informal mentoring reported more career development functions than did those in formal mentoring relationships; they reported higher levels of compensation. Proteges (both male and female) of male mentors made more money than proteges of female mentors. Male proteges of male mentors made the most money; female proteges of female mentors made the least. (Male mentors probably have more organizational power and knowledge than female mentors.)

Formal proteges made the same amount of money and had the same number of promotions as individuals with no mentors; only informal proteges outearned and had more promotions than those with no mentors. Formal mentoring programs should mimic informal mentoring as much as possible. Caveat: the effectiveness of informal mentoring may be due to selection factors.

What administrators can do - case studies

Fried, L. P., Francomano, C. A., MacDonald, S. M., Wagner, E. M., Stokes, E. J., Carbone, K. M., Bias, W. B., Newman, M. M., & Stobo, J. D. (1996). Career development for women in academic medicine: multiple interventions in a department of medicine. Journal of the American Medical Association, 276, 898-905.

The Johns Hopkins University Department of Medicine successfully developed a program to advance women from assistant professor to associate professor.

Benz, E. J., Jr., Clayton, C. P., & Costa, S. T. (1998). Increasing academic internal medicine's investment in female faculty. American Journal of Medicine, 105, 459-463.

How medical schools can improve the status of female faculty.

Schaller, M. & Crandall, C. S. (1999). Individual goals in evolving organizations. American Psychologist, 54, 778-788.

Organizations with a diverse group of people are more open to innovative ideas.

Meyerson, D. E. & Fletcher, J. K. (Jan-Feb 2000). A modest manifesto for shattering the glass ceiling. Harvard Business Review, 127-136.

Small changes in procedures can have large long-term effects. Such changes can range from lengthening interviews (to insure that male interviewers are as effective with women candidates as they are with men) to ensuring equal access to important institutional committees and positions.

What individual women can do

Valian, V. (1998). Why so slow? The advancement of women. Cambridge, MA: MIT Press. Chapter 14.

This chapter summarizes data on personal style and personal effectiveness, but warns that women can do everything "right" and still not advance because of structural problems within the institution. Suggestions: build power, use a "neutral" style in professional settings, become an expert, negotiate, bargain, seek promotion, seek challenging assignments, seek information.

Kanter, R. M. (1979). Differential access to opportunity and power. In R. Alvarez & K.G. Lutterman (Eds.), Discrimination in organizations (pp 52-68). San Francisco: Jossey-Bass.

A manual on how to achieve power in organizations. She defines power as efficacy in shaping the goals and policies of an organization or group. Activities build power if they are a) out of the ordinary or pioneering or not part of the job description, b) visible to others in the group, and c) relevant to current organizational problems. People who want to advance should shun routine, invisible jobs. Administrators should equalize the presence of men and women in such jobs.

Ragins, B. R. & Sundstrom, E. (1989). Gender and power in organizations: a longitudinal perspective. Psychological Bulletin, 105, 51-88.

Women are less likely than men to obtain or receive information about promotion possibilities, job openings, and other opportunities for advancement.

Ridgeway, C. L. (1982). Status in groups: the importance of motivation. American Sociological Review, 47, 76-88.

To be accepted as a leader, both men and women must demonstrate their competence to the group, but women in addition must demonstrate that they are not trying to acquire status at the expense of other members of the group. Women must subordinate, and be seen to subordinate, their personal needs to the needs of the group. Attempts at self-aggrandizement by women are particularly negatively perceived. Implications: women should be impersonal, friendly, and respectful.

Stuhlmacher, A. F & Walters, A. E. (1999). Gender differences in negotiation outcome: A meta-analysis. Personnel Psychology, 52, 653-677.

Walters, A. E., Stuhlmacher, A. F., & Meyer, I. I. (1998). Gender and negotiator competitiveness: A meta-analysis. Organizational Behavior and Human Decision Processes, 76, 1-29.

Kary, L. J., Thompson, L., & Galinsky, A. (2001). Battle of the sexes: Gender stereotype confirmation and reactance in negotiations. Journal of Personality and Social Psychology, 80, 942-958.

Men are more competitive and more successful than women in negotiations. One determinant of negotiation success is the 'opening bid'; men tend to make more extreme opening bids than women. In a laboratory simulation of mixed-sex purchase negotiations, ambitious women did worse when their gender stereotypes were implicitly activated and better when they were explicitly activated (leading to reactance).

Spencer, S. J., Steele, C. M., & Quinn, D. M. (1999). Stereotype threat and women's math performance. Journal of Experimental Social Psychology, 35, 4-28.

Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. American Psychologist, 52, 613-629.

Inzlicht, M & Ben-Zeev, T. (2000). A threatening intellectual environment: Why females are susceptible to experiencing problem-solving deficits in the presence of males. Psychological Science, 11, 365-371.

Gender schemas are mentally invoked both by observers and by women themselves when women are in a male domain, such as mathematics, and their status as women is highlighted. Women with high aspirations are subject to stereotype threat in such circumstances, resulting in a decrement in performance. Women placed in a group with two other people performed worst on a math test if the other two people were male, next worst if one of the other two was male, and best if none were male. Males were unaffected by the sex composition of the group.