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When Discrimination Makes "Sense"

THE RATIONAL BIAS THEORY

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Rational bias theory conceives of discrimination as the consequence of self-interested managers making personnel decisions concerning subordinates based on the managers' own careers rather than on the abilities of their subordinates. The theory is situational and perceptual in nature and is additive to other social science approaches to discrimination rather than conflicting with them. This chapter reviews three studies offering preliminary support for rational bias in organizations. The findings suggest explanations as to why organizational discrimination has proven difficult to eradicate, and practical implications as to how discrimination might be overcome.

Women accounted for 44% of the civilian labor force in 1986; yet only 37% of executive, administrative, and managerial positions were filled by women (U.S. Bureau of Labor Statistics, 1986, p. 30). Median earnings for men in these positions exceeded those for women by nearly \$11,000 per year (U.S. Department of Labor, 1985). In part, the difference in income reflects differences in position: by and large, women are absent from upper levels of major administrative hierarchies. For example, just 2% of 1362 top executives in a major 1985 survey were women; only one chief executive among the 500 largest U.S. industrial firms is a woman—and she acknowledges that she obtained the position through family control of the firm (Hymowitz & Schellhardt, 1986). One might argue that any influx of women into lower-level positions (U.S. Bureau of Labor Statistics, 1986) will eventually force organizations to move women up and to pay them equally with men. Nonetheless, inequality between males and females in opportunity and organizational outcomes (for example,

salary and advancement decisions) has been well documented (see Larwood & Gattiker, 1987; Rosenbaum, 1984, pp. 217-222), and continues despite both federal and state antidiscrimination legislation and three decades of feminist and civil rights activism.

Both the patterns of workplace discrimination and some of the major economic, sociological, and psychological theories dealing with it have been examined in earlier volumes of *Women and Work* (see Madden, 1985) and will not be critiqued here. Instead, this article summarizes the work to date on a new line of research examining *rational bias theory*—a theory of discrimination recently proposed by Larwood, Gutek, and Gattiker (1984). Rational bias theory takes no issue with the usefulness of established social science-based theories. Instead, the new theory aims to explain and combat discrimination in some types of managerial personnel actions. In particular, rational bias theory holds that discrimination toward subordinates may be influenced by situational factors irrespective of any personal preference on a manager's part, of official antidiscrimination standards, or of known subordinates' abilities. In this theory, discrimination is the predictable outcome of a "rational" or self-interested response to perceptions of the attitudes of others in superior power positions. When a manager assumes that powerholders have discriminatory preferences, discrimination makes "sense" because engaging in it seems likely to help the manager's own career. It is important to understand that the rationality spoken of in rational bias theory is purely subjective, as seen from the standpoint of the manager in a position to discriminate.

The following section of this article discusses the basis for rational bias theory. Later sections describe the early research results supporting it, and the implications of those results.

THE MANAGERIAL CHOICE TO DISCRIMINATE

Although there are alternative ways to categorize theories of discrimination in organizations (see Larwood, Gutek, & Gattiker, 1984), one of the simplest is by the level of the discriminator's attention to self-interest. Given a social climate interpreted as biased, there are at least three different levels on which theories can operate. In organizations, discrimination is ultimately the result of a decision made by some individual to select, promote, or train a particular person, or to authorize a particular rate of pay. At the first, or least self-interested, level, we accept that the managerial decision maker is unconcerned with social pressures on him or her to discriminate, that he or she seeks only the most ideal skills for the organization and is willing to pay accordingly. Differences in pay or opportunities for men or women as a group can arise when members of one group are correctly perceived as bringing different factors such as higher education to the labor market. Human capital theory, advanced primarily by economists, predicts this result (Becker, 1975; O'Neill, 1985).

Alternatively, discrimination might occur through unintentionally misperceiving the skills or interests of the victim of discrimination—consistent with notions of stereotyping from sociological and psychological theory (Nieva & Gutek, 1981; Shepela & Viviano, 1984; Terborg & Ilgen, 1975). For example, if women are incorrectly stereotyped as less qualified at production work, they are less likely to be enthusiastically recruited for a production engineering position.

At the second level, of increased self-interested behavior, a decision maker might be assumed to favor the group of which he or she is a part or to favor another pressure group. Thus the decision maker might routinely defend the organization's status structure by matching consensually high-status people with high-status positions and higher pay—consistent with some sociological research (Kanter, 1977, pp. 164-205; Lockheed & Hall, 1976). Alternatively, he or she might prejudicially favor one group over another and preferentially pay members of some groups more or more readily hire and promote them—as in economic discrimination theory (Madden, 1985) or in the psychological and sociological study of in-group/out-group relations (Dye & Renick, 1981; Larwood & Blackmore, 1978; Mai-Dalton & Sullivan, 1981).

At the third level of behavior, directed by substantial concern with self-interest, a different picture emerges that is not entirely explicable through prior theories. Here, individual decision makers operate as free agents *solely to their own advantage* rather than to that of the organization or group. Because managerial decision makers at this level are self-interested, they are very sensitive to what will help or hinder their own careers. The managers actively seek out normative information that may suggest what decisions are expected of them and which are most personally advantageous. Sometimes decisions aiding oneself are consistent with defending status hierarchies, and at times they result in obtaining the best employees and helping them succeed. Nonetheless, the managers make such decisions without reference to these concerns—unless they are themselves likely to be affected. Rational bias theory proposes that this type of behavior explains much of the discrimination taking place in organizations: Self-interested decision makers find personal advantage in it even though they may not care for discrimination personally, may be conversant with the laws against it, may understand that the people being discriminated against are as capable as anyone else, or may even be themselves a member of the disadvantaged group. This picture of instrumental discrimination offers both new solutions to discrimination and an explanation for the partial ineffectiveness of some existing solutions.

How realistic is this depiction? We have drawn it as sharply as possible and certainly do not believe that those in business or other organizations behave without regard for ethics. The self-interested manager—one who behaves as though coolly and rationally weighing the personal advantage of alternatives—is, however, well-recognized in organizational motivation theory. For example, expectancy, or VIE (valence-instrumentality-expectancy), theory suggests that managers prefer alternatives yielding the highest subjective expected value on

the basis of a conscious or unconscious calculation. Expectancy theory has been repeatedly applied in predicting decision outcomes (Campbell & Pritchard, 1976; DeCotiis & LeLouarn, 1981; Matsui, Kagawa, Nagamatsu, & Ohtsuka, 1977; Vroom, 1964). Of course, awareness of the legal penalty for discrimination and the likelihood of being discovered would play a role in a manager's consideration of alternatives according to the expectancy approach.

If self-interest is accepted as a determinant of behavior, how does the managerial decision maker infer that it is in his or her self-interest to discriminate or refrain from discriminating? Correspondent inference theory, a form of attribution theory developed to examine the manner in which an alert perceiver infers the beliefs of others, suggests that such inferences may readily be made from the statements and behaviors of others in the working environment (see Jones & Davis, 1965; Jones & McGillis, 1976; Ross & Fletcher, 1985, pp. 75-79). Earlier research indicates that such inferences and a resulting show of solidarity with the opinions attributed to more powerful others may be particularly likely when the manager is ambitious (Porter & Roberts, 1976, p. 1575; Webber, 1970), and may occur even though the powerful others will not be affected directly by the decision (Baskett, 1973).

Predictions of Rational Bias Theory

It follows then that discrimination might be anticipated to occur whenever potential discriminators feel that they are served by paying attention to the norms of the situation within which they work, and whenever those norms appear to favor discrimination. Under these conditions, a combination examined in Study 1 below, discrimination "makes sense." The conditions further give rise to several specific hypotheses offered by Larwood, Gutek, and Gattiker (1984). Although these hypotheses seemed consistent with the theory, common sense, and limited social science research, they had not been tested within the management arena. The hypotheses were intended to predict biased behavior resulting from the importance of the situation (Hypothesis 1, below), perception of social signals (Hypotheses 2 to 4), relative power (Hypotheses 5 to 7), status (Hypotheses 8 and 9), and stereotyping and competence (Hypotheses 10 and 11). The specific hypotheses provided below were operationalized and tested in Studies 2 and 3.

Hypothesis 1: A manager is likely to ignore pressures for discrimination when less is at stake, and to pay more attention to them when more is at stake.

Other than situational importance (Hypothesis 1), the extent of rational biases might also vary with the social signals provided by those holding power over the managerial decision maker. If the norm favors discrimination, then discrimination is the usual, or default, behavior. On the contrary, however, individuals who send differing social signals—such as by themselves being

members of discriminated-against groups—or who engage in counternormative behavior attract attention and may allow the inference that their preferences oppose the norms (Jones & McGillis, 1976, p. 391; Ross & Fletcher, 1985, p. 77). Such counternormative signals may suggest that the manager risks punishment for discrimination. Those who are sensitive to such signals might then decrease discrimination or even overcompensate for it.

Hypothesis 2: If someone holding power over the manager is a member of a discriminated-against group, then the manager is less likely to discriminate.

Hypothesis 3: If a member of a discriminated-against group made the initial contact with the manager on behalf of the powerholder, the manager is less likely to discriminate.

Hypothesis 4: If the powerholder has gone to an unusual length to state the unacceptability of discrimination, the manager is less likely to discriminate.

The rational bias phenomenon is based on seeking advantage under conditions of relative insecurity. Thus it seems reasonable for managers who are in particularly weak positions to pay more attention to the apparent preferences of those having power over them in order better to maintain or to improve their positions (Bass, 1981, p. 431-429; Hollander, 1964).

Hypothesis 5: A manager inexperienced in any position is more likely to discriminate.

Hypothesis 6: If the powerholder indicates that prior interactions with the manager were unsatisfactory, the manager is more likely to discriminate.

Hypothesis 7: If the relationship between the manager's and the powerholder's organization is not well established, the manager is more likely to discriminate.

Because rational bias is based on beliefs concerning the opinions of powerholders, managers are likely to be more sensitive if their subordinates are in close contact with the powerholders, or if they seem to be operating independently, than if the subordinates are out of sight or clearly controlled. Contact between a subordinate and the powerholder immediately increases the salience of sex and race differences (Larwood, Zalkind, & Legault, 1975). The manager then can be seen as intentionally and fully responsible for any unusual behavior by the subordinate (Ross & Fletcher, 1985); at the same time, the manager calls the powerholder's beliefs into question if the subordinate does not have the anticipated characteristics (Moscovici, 1985). Finally, sex and race have status values—with women and minorities having lower status than males and Whites—and performance is often assumed to be consistent with status (Allen, 1979; Eagly & Wood, 1982; Lockheed & Hall, 1976). Any affront to the beliefs or status of the powerholder might be partly mitigated, however, by assuring that the unexpected subordinates are operating under close supervision.

Hypothesis 8: Discrimination increases with the subordinate's expected increasing external contact with the powerholder.

Hypothesis 9: Discrimination is greater against those seen by the powerholder to be operating independently than against those who are closely supervised.

A final pair of predictions concerns credibility. There is a great deal of literature in psychology and sociology to the effect that men and women are each preferred on tasks that are socially stereotyped as appropriate for them (see Hansen & O'Leary, 1984; Nieva & Gutek, 1981, pp. 76-79; Shepela & Viviano, 1984). Although the supporting (and frequently erroneous) assumption might be made that men and women have different backgrounds (Geis, 1983), in the context of testing rational bias theory, we specified the backgrounds and work histories of the subordinates as identical. Nonetheless, a client might still be concerned with the assignment of someone who does not fit a stereotypic role. On the other hand, we anticipated that objective evidence known to the client that the subordinate is truly extraordinarily qualified would overwhelm discrimination because it would eliminate any suspicion that inappropriate assignments are made or that the person assigned is competent (Taynor & Deaux, 1973).

Hypothesis 10: Discrimination is greater if subordinates are associated with projects stereotyped as inappropriate than with projects stereotyped as appropriate to them.

Hypothesis 11: Discrimination is overridden by recognized irrefutable evidence that the individual is consistently superior in performance.

TESTING RATIONAL BIAS THEORY

As noted above, many of the components of rational bias theory—power, perceptual and motivational processes—are already well established in the management and social science literatures. There seems no need to reexamine these phenomena in order to test the resulting theory. What has largely been missing, however, is a set of observations as to whether the components perform together in the manner anticipated.

Field studies have reported some indirect evidence corroborating the notion of rational bias. One early study reported that managers were more likely to discriminate against Jewish male subordinates when they were expected to work with potentially biased customers (Quinn, Tabor, & Gordon, 1968; see also Dexter, 1979, 1985). Compared with managers who fail to comply with affirmative action guidelines, those following the guidelines may believe they risk losing prestige in the eyes of others (Barnhill/Hayes, Inc., 1979).

In directly testing rational bias theory, one would ideally develop a field experiment in which managers gave their views on the organization's support for discrimination and then were observed to make personnel decisions in response to their situation. As a practical matter, this research is exceptionally difficult for two reasons: most medium and large U.S. organizations have become "gun-shy" concerning research that might expose them to discrimination litigation (as this would if it demonstrated the theory), and discrimination may be difficult to observe if the managers making discriminatory decisions are also aware of the legal implications.

Although ruling out the most direct tests, we were able to design two types of indirect examinations of the theory. In one (Study 1), we surveyed the views of executives employing outside management consulting firms. Although actual discrimination was not examined, the results could be matched with an earlier study of the management consulting industry to show whether pressures from the client firm might reasonably be a source of observed statistical discrimination in consulting firms. Thus Study 1 might provide an overall confirmation that the conditions for rational bias do exist and can be used to explain actual discrimination. It may be argued that the executives we surveyed had no reason to respond honestly; however, studies of self-report of illegal behavior suggested that the responses would be reliable (see Hollinger & Clark, 1983, pp. 21-22).

The operation of rational bias theory allows a series of more detailed predictions to be made concerning when discrimination will, or will not, occur (Hypotheses 1 to 11, described in the preceding section). The specific predictions are tested in the section below, describing Studies 2 and 3. Because of the need for precision, these more complex studies applied a different technique from Study 1, examining the preferences of business students during a series of experimental scenarios in which they were asked to select between a male and a female subordinate. Surveys and laboratory experiments with students used as surrogates for managers have sometimes been attacked as providing an invalid portrait of the world drawn from those not yet experienced in it. We disagree with this criticism for three reasons. Most of the students surveyed in our research worked, and many had substantial experience. Second, consensual biases are often unexpressed and the students are likely to have information as accurate concerning the consensual norms of business as the managers potentially making decisions to discriminate. Finally, the meta-analyses (statistical summarizations of the effects found in earlier studies) of Kraiger and Ford (1985) and Olian (1986) indicate that, for personnel decisions, sex and race discrimination are more difficult to find in laboratory conditions than in the field. Thus any finding of discrimination seems likely to be generalizable to actual business conditions.

Study 1: Can Discrimination Result from Rational Bias?

In a study of 61 California management consulting firms, Gealy, Larwood, and Elliott (1979) found that the proportion of women decreased with increasing hierarchical level from 91% of support personnel to just 4% of consulting partners. Explaining the reasons for this decrease, the owners of the consulting firms said that clients were less likely to accept women consultants, that the types of problems to which they could be applied were limited, and that women had a more difficult time than men in establishing contacts and client-consultant rapport. The owners also reported that women consultants had the owners' confidence, suggesting that any problems experienced by women stemmed either from the women's consulting techniques or from the owners' fears of the

reaction of clients to women consultants. Potential sex differences in consulting technique were ruled out in another phase of the Gealy et al. study, which compared the consulting strategies of female with male consultants.

The following question was asked by the present Study 1 (Larwood & Gattiker, 1985): Do *client* firms really prefer male consultants over female consultants, and, if so, why? Could the consulting firm owners in the Gealy et al. findings be reacting to pressure to discriminate on the part of their clients? This would be consistent with rational bias theory's overall prediction of decisions favoring one's own career. If there were no pressure from consulting firm clients, then the consulting firm owners might be assumed to be using client-consultant interaction as a convenient way to hide their own discriminatory preferences or to be reacting only to incorrectly perceived client expectations.

In order to determine the appropriate explanation, Study 1 surveyed 52 consulting *client* firms in the southwestern United States in 1982. The firms averaged over 4000 employees each and had business specialties paralleling those of the consulting firms in Gealy, Larwood, and Elliott (1979). All but three of the surveys were completed by men, generally the chief executive or a vice-president.

In response to direct questions, officers of the client firms evaluated their preferences for male or female consultants on a scale from 1 (definitely the male) to 7 (definitely the female) with 4 being the neutral scale midpoint. The client firm executives stated that they would prefer to work with a male consultant (mean 3.69), believed that a man would provide better advice (3.61), felt a man would be more credible to others (3.28), and felt that the male consultant would more readily gain rapport with their staffs (3.39). The clients also preferred male consultants for problems of a technical or planning and policy nature, but were more willing to consider women for marketing and personnel. Each of the findings was statistically significant (beyond .05) and corroborated the beliefs of consulting firm owners in the Gealy et al. study that women consultants were more likely to have difficulty with clients and might be restricted to particular problems.

As suggested by rational bias theory, a self-interested consulting firm owner would respond to the biases of clients by discriminating against women consultants if the views of clients could not be changed. This would occur despite information that the women consultants were as good as men. With consequently restricted experience and limited demand for their skills, one would expect to see fewer women at the top in the management consulting business—as found earlier by Gealy et al.

On the basis of Study 1, the antecedents (discriminatory client attitudes) and consequences (sex discrimination by those serving the clients) predicted by rational bias theory were empirically supported. Nonetheless, the link between the antecedents and the consequences, as well as the conditions under which bias—or even reverse discrimination—might take place, still had to be examined.

Studies 2 and 3: Are the Specific Hypotheses of Rational Bias Supported?

Two studies were undertaken using students of business administration at a major urban (nonresidential) university in order to fill these gaps. Of 374 participants in Study 2 (Szwajkowski & Larwood, 1986), 43% were female, 76% were White, 96% had work experience, and 80% were currently employed; the mean age was 24. Of the 293 respondents in Study 3 (Larwood, Szwajkowski, & Rose, 1988), 51% were female, 74% were White, 94% had been employed, and 78% were currently employed; the average age was 22. As we pointed out earlier, any discriminatory results based on these samples seemed readily generalizable to business practice (see Olian, 1986).

In addition to the hypotheses described above, Studies 2 and 3 were together designed to determine whether rational bias can successfully predict racial discrimination. Study 2 examined the first seven predictions while specifying only subordinate and, where appropriate, powerholder sex. Study 3 reexamined Hypotheses 2 to 4, providing both sex and race information, thereby allowing the effect of the double specification to be examined. Study 3 alone investigated Hypotheses 8 to 11.

Why add the race variable? At least one study (Schmitt & Lappin, 1980) found that White females were more consistently discriminated against in performance ratings than other sex/race groups; thus race might be a confounding factor. It was of substantial interest to know whether Black women would be treated relative to Black men in the same manner as White women relative to White men and whether sex and race considered together would produce different effects than sex separately. Because the primary issue of concern in this review is sex discrimination, comparisons between Black and White subordinates of the same sex will not be discussed.

While there is little managerial literature examining the position of Blacks in personnel decisions (see, however, Kraiger & Ford, 1985), and less concerning Black women (see Nkomo, in press; Olian, 1986), field studies have demonstrated that the earnings levels and occupational prestige of samples of Black workers with college degrees are lower than comparably educated Whites (Parcel, 1979). Although Blacks constituted 11% of the labor force in 1985, only 6% of executives, administrators, and managers were Black (U.S. Department of Labor, 1986). A slower rate of salary increase and promotion has been documented for minority MBAs as compared with White MBAs (Brown & Ford, 1977). Blacks averaged a salary increase of 23% over a five-year period, compared to 54% for Whites in that study; just 31% of Black but 73% of White MBAs who had been out of school for four or more years had reached middle management or higher positions.

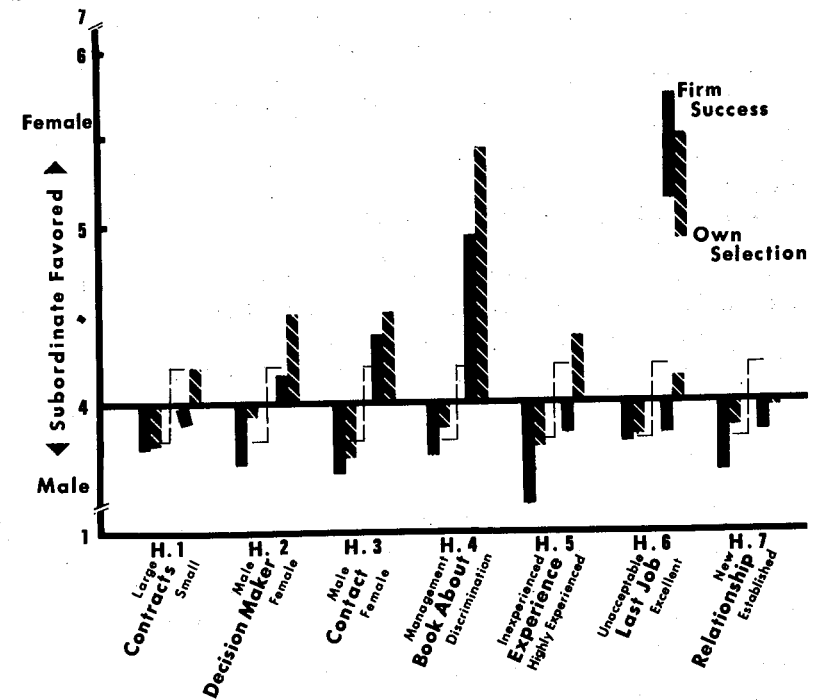
In Studies 2 and 3, the participants volunteered for a computerized experiment. The computer presented a hypothetical situation placing the participant in the role of a middle-level manager in a firm dependent on

obtaining contracts from other firms. The participant was given two subordinates, both of whom had been hired by the participant from the top 10% of a Big Ten MBA graduating class on the same recruiting trip. These stipulations were unequal in any material way. The two subordinates were depicted as a male and a female in Study 2, while both their sex and race (Black or White) were varied in Study 3. A series of questions followed, asking participants either (Study 2 only) how likely their firm was to receive a contract from the outside organization under a series of hypothesis-related conditions if it sent the female rather than the male subordinate to negotiate with the customer, or (both Studies 2 and 3) which subordinate they would personally select to help them negotiate the contract. Respondents were assigned to independent conditions at random by the computer. For both studies, final information was gathered concerning the perceived values of business and whether the participants felt they could influence those values. All research questions used a seven-point scale response format, such that a 4.0 indicated neutral or no preference.

Results

Hypothesis 1 (Study 2). Is sex discrimination by managers greater for more important tasks? Participants were presented with a situation in which one of their assistants was to join the negotiations with a client for either a major or a minor contract. As expected, they felt that their firm would be less likely to succeed with a larger contract if the female subordinate was sent to the negotiations than with a smaller contract, and they were more likely to send a male themselves for the larger than for the smaller contract. These differences are depicted for Study 2 in Figure 11.1; for convenience in interpretation, the results in that figure are shown as differences from the scale midpoint (means below 4.0 indicate belief that a male is more likely to succeed or indicate a preference for a male, while the reverse is true for means above 4.0). All differences discussed are statistically significant at .05 or better unless indicated.

Hypotheses 2 to 4 (Study 2). The next three hypotheses asked whether information concerning a client's preferences would influence discrimination. For each of these hypotheses, study participants were presented with a situation having either the circumstances signaling counternormative conditions (a woman making the final contract decision for the client, contact between the firms made through a woman, or the client firm's president "speaking out against discrimination" and writing "a book on the importance of not discriminating"), or the opposite (a man making the client's decision, contact through a man, or the client's president known "as an expert on all aspects of business management" and writing "a book on how to be an effective manager"). It should be noted that effective management cannot be construed as directly encouraging discrimination—but it was expected to allow the default norm to operate. Supporting the predictions, participants reported that their firm would be more likely to obtain the contract if it sent a woman in each of the counternormative circumstances than in the opposite conditions. Likewise, they



NOTE: Differences are shown from the scale midpoint (4.0) on a seven-point scale for each hypothesis. "Firm Success" indicates the participant's belief that a firm would be helped or hurt by the female subordinate. "Own Selection" refers to the subordinate the study participant would prefer. Using Hypothesis 4 as an example, the figure shows that males are modestly seen as more helpful for contact with a firm whose president has written on effective management and are somewhat more preferred by our study participants. In contrast, women are viewed as substantially more helpful for contact with a firm whose president has written against discrimination and are strongly preferred by our participants.

Figure 11.1 Rational Bias: Sex

were significantly more willing to select the female subordinate to accompany themselves in the counternormative conditions.

Hypotheses 5 to 7 (Study 2). The final three hypotheses of Study 2 suggested that a manager's discrimination is more likely when he or she appears to be in a position of weakness or insecurity than when he or she is in a position of strength. Managers were depicted as having either weak situations (the manager was inexperienced and new on the job, previous work had been unacceptable and a warning had been issued, the firm had never before worked with the client) or stronger ones (the manager was experienced, previous work had been excellent and a commendation had been issued, the firm has an established relationship with the client). The individual experience hypothesis (5) was

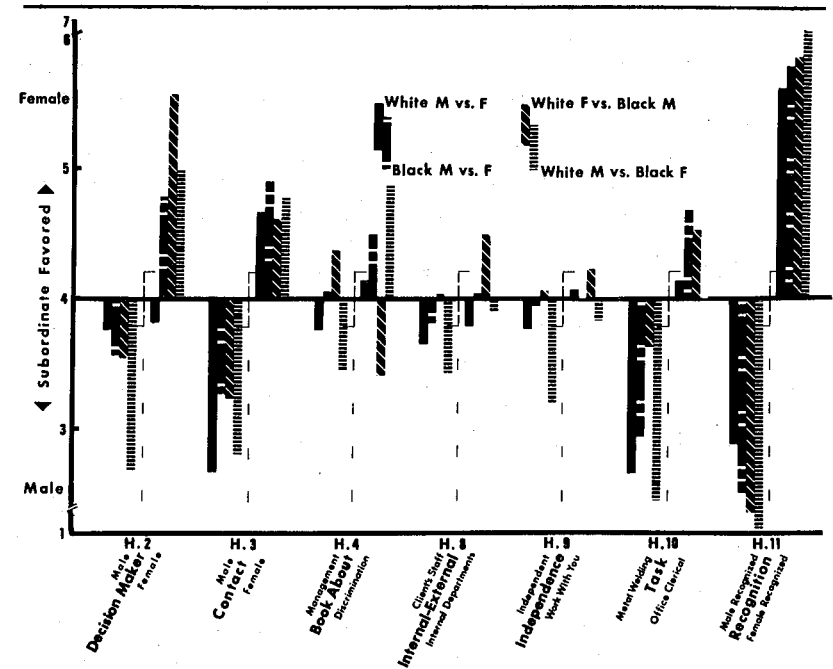
supported both for questions asking the likelihood of obtaining the contract if a woman rather than a man was sent, and for questions asking which subordinate participants would prefer to accompany themselves. Hypothesis 6, predicting that discrimination would increase with less successful prior interaction, was supported only when respondents considered the likelihood of obtaining the contract if a woman rather than a man were sent—but not for the personal decision of who to send. In contrast, Hypothesis 7, predicting increased discrimination when dealing with a new client, was supported only by participants personally deciding whether to send a male or female subordinate.

Overall, the results for Study 2 agree quite well with theory *both* for questions estimating the likelihood of the firm's success when sending a male or female subordinate to the client, and for the participant's willingness as a manager to send one or the other subordinate. Because respondents received only one of the two forms of each question, results of the two question formats are independent of and provide confirmation for one another.

Study 3 added subordinate race as a variable. The question format in which participants were asked to choose between two subordinates was retained, while the alternate format inquiring into the firm's likelihood of success with a particular subordinate was dropped in the third study. In order to be certain that the results of Study 3 were consistent with those of Study 2, the studies were overlapped, with the signaling hypotheses (2 to 4) being tested a second time. Thereafter, Hypotheses 8 through 11 were examined.

Hypotheses 2 to 4 (Study 3). In Study 3, the two subordinates had a different sex and race combination. Consequently, the client decision maker (for Hypothesis 2) or the contact person (for Hypothesis 3) was identical to one of the subordinate combinations. The particular combination was varied at random by the computer program, and any respondent saw only one form of each question. Our reexamination statistically confirmed the earlier results. Looking just at the two conditions comparing male and female subordinates of the same race (White male with White female subordinate, or Black male with Black female subordinate), respondents said they preferred to send someone matching the sex of the client decision maker, and that they preferred to be accompanied by someone of the same sex as the original contact within their own firm. Hypothesis 4 was also reconfirmed: They preferred to send a woman when the client's president had spoken out and written a book against discrimination more often than when the speaking and writing was merely about management. Figure 11.2 shows these results against the scale midpoint (4.0 on the seven-point scale) for each subordinate comparison. Again, all differences described are statistically significant unless noted.

For cross sex x race comparisons (White female with Black male or White male with Black female subordinate), participants again preferred to be accompanied by the subordinate matching the client or the contact person. Similarly, they preferred the Black female over the White male if the client's president had written against discrimination. These results confirm the Study 2 findings and provide strong support of rational bias theory. Interestingly, in the



NOTE: Differences are shown from the scale midpoint (4.0) on a seven-point scale for each hypothesis. Study participants indicated the extent of their preference for one of the subordinates over the other in a comparison between two of them. Using Hypothesis 4 as an example, the figure shows that our study participants, asked to select someone to accompany them to a firm whose president has written a book on effective management, select a White male over a White female, a White female over a Black male, and a White male over a Black female. Selecting someone to accompany them to a client who had written against discrimination, they preferred a Black female over a Black male, a Black male over a White female, and (most strongly) a Black female over a White male.

Figure 11.2 Rational Bias: Sex x Race

ambiguous comparison between a White female and a Black male subordinate, participants preferred that the Black male accompany them if the client had written against discrimination, but that the White female do so if the client wrote about good management practice. The analyses for Study 3 found no other inversions of sex effect.

Hypotheses 8 and 9 (Study 3). These hypotheses predict that discrimination is stronger when subordinates have more outside contact, or when the subordinates are more independent of supervision. In order to examine Hypothesis 8, respondents were asked to select a subordinate to work out final details on a potential contract either with the client's staff or with other departments in their own firm. As anticipated, the male subordinate was more

strongly preferred for work with the external client than with internal departments. Results for the test of Hypothesis 9 were similar. Respondents selected a subordinate when either "the assistant alone will work with the client" or "you will be completely in charge of the assistant's work with the client firm." Again, an analysis showed that the male subordinate was more strongly preferred for the independent than for the closely supervised position. Subordinate race was irrelevant to these results (Figure 11.2).

Hypotheses 10 and 11 (Study 3). Our final predictions were that discrimination would be found to be greater on tasks that are stereotyped as inappropriate, but that it would be overcome by objective evidence of an individual's superiority. For Hypothesis 10, participants were asked to select an assistant to accompany them to a potential client that needed help in modernizing either its "office clerical services" or its "metal welding services." As anticipated, respondents preferred female subordinates in the office clerical situation, but males in the metal welding situation. Questions testing Hypothesis 11 identified one of the assistants as having "quickly become nationally recognized for work in this field" and having "won a major award" while the other had "not received any unusual notice." Without regard to sex or race, the person winning the recognition and award was preferred over the other subordinate. Again, the result was consistent with theory.

PARTICIPANT BELIEFS

Discrimination in rational bias theory results from the external pressures perceived by the manager. Thus it was important in Studies 2 and 3 to establish that respondents believed that the norm of business supported discrimination and that they were forced to accept that norm. These beliefs would lead to the assumption that clients of the hypothetical firm around which the hypotheses above were built would support the prevailing norms (Ross & Fletcher, 1985, p. 76) and might pressure them to do likewise. A final series of questions in both studies assessed perceived business attitudes toward discrimination and beliefs that the participants could influence those attitudes. These questions were asked *last*, so that awareness of them could not affect earlier results. The participants indicated that they strongly believe both that business discriminates and that there is little they can do to alter the discrimination, at least by the clients (Table 11.1).

Of course, the beliefs concerning a preference for discrimination shown in Table 11.1 may be quite wrong and may not reflect actual preferences or intended practice of top executives. Nonetheless, if a manager *believes* that those having power maintain discriminatory preferences, or is even unsure, he or she may feel that it is advantageous to discriminate. In order to establish the link between the values ascribed to business and discrimination, the beliefs were entered as multiple regression predictors of the results for Study 3. In each of the tests relating the beliefs to the hypotheses predicting bias (Hypotheses 1 to 10),

TABLE 11.1
Assumed Bias in Business and Ability to Influence It

Question	Study 2	Study 3 (Overall)
	Mean	Mean
1. What proportion of business people have a predisposition that results in discrimination? (1 [all] -7 [none])	3.69	3.51
2. Business people believe (men/Whites) are (more) capable than (women/Blacks) at making important decisions. (1 [definitely more] -7 [definitely less])	2.37	2.76
3. Business people believe (men/Whites) are (more) capable than (women/Blacks) at impressing clients. (1 [definitely more] -7 [definitely less])	3.08	3.10
4. People at the top of organizations are (more) biased against (women/Blacks) than people at the bottom. (1 [much more] -7 [much less])	3.12	3.18
5. In working with a client, business people subordinate their own preferences to those of the client. (1 [always] -7 [never])	2.90	2.92
6. Clients are influenced by their feelings, desires, and emotions. (1 [completely] -7 [not at all])	3.03	3.10
7. If a client is biased against (women/Blacks), there is little that someone trying to sell to the client can do aside from go along. (1 [strongly agree] -7 [strongly disagree])	3.29	3.54

NOTE: Study 2 examined only sex comparisons, while Study 3 data include sex x race comparisons. Actual sex and race terms were assigned randomly by computer in the study. The sex and race terms and scale directions in parentheses indicate the outcome directions shown by means. Means below 4.0 indicate greater bias against women or Blacks on a seven-point scale. All means differ significantly from the scale midpoint at .05 or better by a two-tail t-test.

the relationships were statistically reliable (beyond .05), accounting for an average of 46% of the adjusted variance in the personal selections respondents had made. Plainly, those who thought business was more biased were themselves more willing to discriminate. This would, of course, be expected if the attribution of bias led to later discrimination as predicted by rational bias theory. In contrast, the results for Hypothesis 11, which correctly predicted that discrimination would be overridden by obvious ability, were not reliably related to the beliefs concerning business values. Because the situation testing the hypothesis was intended as one in which pressures toward bias can be ignored, the lack of a significant relationship here also fits rational bias theory.

Finally, it would be easy to assume that men are more biased against women than women, or that Whites are more biased against minorities than minorities. Similarly, those with longer work experience might have learned that discrimination is not an acceptable way to behave or might have perceived that discrimination is not the norm. Thus the results might be artifactual to our particular sample. Multiple regression analyses of the relationships between demographic background and results for the hypotheses produced neither consistent nor meaningful findings. Said differently, women as well as men and Blacks as well as Whites were equally likely to engage in the discriminatory preferences we have described.

CONCLUSIONS FOR THE THEORY

Rational bias theory suggests that some (but not all) discrimination results from the activities of self-interested managers. The managers assess the apparent biases in their environment before making personnel decisions themselves. In order to gain the greatest advantage, they make personnel decisions consistent with perceived environmental demands. In a climate supporting discrimination, decisions sensitive to discrimination follow. Although one may readily argue that bias is not objectively rational for a firm or work group interested in productivity, bias nonetheless may be perceived as politically advantageous or even requisite of organizations and individuals in situations subordinate to powerholders who are thought to prefer discrimination.

The three studies reviewed here each support rational bias theory. The first study found that rational bias is a viable explanation of the Gealy, Larwood, and Elliott (1979) findings of discrimination in management consulting. The original research found that consultants discriminated against women, while the research discussed here found a counterpart in the biased preferences of consulting; however, it was not certain that the consultants surveyed by Gealy et al. were actually responding to the client preferences uncovered in Study 1.

The following two studies placing management students in the position of making personnel decisions were designed in order to assess simultaneously presumed preferences for discrimination by business people and the counterpart reactions to those preferences. Study 2 used alternative questions to determine

whether the business students felt their firms would be benefited or hurt by selecting a woman for a particular assignment, and whether they personally would select a man or a woman to accompany them on the assignment. Study 3 asked participants to select one from among two subordinates differing in sex and race to accompany them to the assignment.

For both studies, the results supported hypotheses associated with rational bias theory. Overall, these hypotheses proposed that participants would predict outcomes to be influenced by subordinate sex, and would themselves select subordinates in a sex-conscious manner. The results indicated that participants felt that discrimination is a workplace norm, and the biases of clients and customers are difficult to change.

Given those conditions, Studies 2 and 3 found evidence that men were preferred on more important assignments, on assignments dealing with men or obtained through men, on assignments in which the client's biases are not known, on riskier or less-well-established assignments, on assignments involving more external or independent action, on assignments in which tasks are stereotyped as appropriate for men, or when they have been independently recognized as good in their field. Discrimination is overridden, and in some cases women are preferred, when the assignments are less important, when women are being dealt with or assignments have been obtained through women, when the client is known to be against discrimination (not necessarily supportive of women), on less risky and better-established assignments, on assignments involving more internal or less independent action, on those stereotyped as appropriate to women, or when the women have been independently recognized as good.

As a general rule, the results we found were robust across changes in the research design and in the participants' characteristics. Thus Study 2 found that participants' decisions for their subordinates largely paralleled results on the alternate questionnaire form asking for the firm's likelihood of obtaining a contract by sending a woman to negotiate with the client (Figure 11.1). Study 3 found that all subordinate race combinations generally produced results in the same direction favoring either a female or a male subordinate irrespective of the race of either one (Figure 11.2). Although not elaborated upon in this summary, we also found that neither participant sex, race, age, nor work experience played a consistent role in the results.

Three studies do not, of course, "prove" a theory. They can demonstrate only that, under some limited sets of circumstances, the theory has performed successfully. At least two types of further research are needed. First, more research needs to explore the current predictions of rational bias. Field studies would be particularly welcome, perhaps pairing archival analyses of personnel records with the surveyed perceptions of biases in the particular organization. Our work has focused on discrimination occurring when an individual attempts to match the presumed biases of an external powerholder in a second organization. Rational bias theory should also be useful in describing interac-

tions within a *single* organization—perhaps working under a biased superior predictably evokes this phenomenon. Research to date has examined situations in which a discriminator's self-interest coincides with the firm's interest in obtaining a contract; it would be of interest to examine situations in which the two instead diverge.

Research is also necessary to develop rational bias theory further. Any situation in which a manager's self-interest is at stake and values concerning women are related may have the potential to arouse discrimination. Thus hypotheses might explore the extent to which variations in the manager's personal concern with self-interest affects subsequent discrimination. Perhaps, for instance, some measure of altruism as a personality dimension can be found to predict resistance to discrimination. Similarly, rather than consider only the assignments given to personnel, it would be fair to ask how rational bias translates to income. For example, is there a trade-off in salary at which a manager is willing to employ a woman despite awareness of a prevailing atmosphere of bias? Must powerholders be informed of the bargain in order for the rational manager to feel secure? Or does their knowledge that the woman has been hired cheaply undermine her credibility on counterstereotypic assignments?

IMPLICATIONS FOR CAREER DEVELOPMENT AND POLICY

Although it overlaps in prediction with other views of discrimination, rational bias theory comes from a different perspective. Consequently, one might anticipate that its predictions, if they continue to be supported, would lead to somewhat different emphases for policy and career development. This section discusses some of the implications of rational bias theory for individuals, managers and organizations, and policymakers intending to diminish the impact of discrimination and to utilize better human resources.

The Problem and the Basis for Change

Most striking, but not surprising, we found that our study participants held the view that business prefers to use men over women in the most frequently encountered operations. Although this dark view may be incorrect, it is certainly supported by labor market statistics; other research indicates that the perception of discrimination correlates highly with such statistics (Turner & Turner, 1981). It is against this backdrop that managers believe they cannot afford the risk of employing a woman on major projects (Hypothesis 1) and that they respond to a chief executive who desires good management practice by discriminating (i.e., selecting a man over a presumably equally qualified woman—Hypothesis 4). Although Study 1 found that the employers of management consultants did prefer discrimination among consultants, it is not necessarily true that a particular client, or even broad groups of clients, prefer to discriminate. The

point, however, is that discrimination based on rational bias may continue irrespective of the actual preferences of powerholders. Unless powerholders who dislike discrimination effectively communicate their preference (Hypotheses 2 to 4), they are assumed to support that norm.

Affirmative action and the statement that one is an "equal opportunity/affirmative action employer" seem now to be a part of the general landscape among medium- and large-sized organizations. Because affirmative action is widely required by government regulation, the announcement of it alone can no longer provide the signal that the organization really does not support discrimination. Instead, it signals only that the organization understands the regulatory environment (see Hitt, Zikmund, & Pickens, 1982). Thus rational bias is likely to be unaffected by such policies unless they are administered in an extraordinary manner that makes them credible as a preference.

Nothing that we have said should be taken to indicate that equal opportunity is a lost cause; far from it. With each hypothesis, we have striven to show that although one alternative leads to discrimination, another reverses or eliminates bias. Without exception, everything examined here suggests that rational bias provides a keen two-edged sword. The following sections provide some specific ideas on how that sword might be put to use.

Suggestions for Organizational and Governmental Policymakers

Organizations are interlocked, and many managers are not in a position to practice complete equal opportunity unless they are assured that those holding power over them prefer that policy. Those attempting to influence policy will ideally start at the top of this chain. It follows that the chain of reactive discrimination can most readily be broken by the intervention of either of two types of organizations (or situations). In one ideal type, the organization should be independent of important individual powerholders and capable of influencing those beholden to it further down the chain. Such organizations include the U.S. government (which instead continues to support discrimination in many areas such as the military, procurement, high government service-level positions, and cabinet appointments), but also those firmly in control of critical resources such as organizations holding unique technology, solid market positions, or important natural resources. A second organization type with the potential to break the chain of discrimination is an organization associated with a female-dominated profession, such as retailing (in which women have traditionally been welcome to work but not to become executives), or an essential profession in which women have a solid representation and to which negative stereotypes do not apply.

Equal opportunity pressure groups are likely to have the greatest success in making their case to these types of organizations because of the position and nature of the firms and government organizations. Nonetheless, for the

organizations to influence others, we emphasize that they must provide a credible (visible, unavoidable, impressive, and continuing) signal (Hypothesis 4). While a single woman in the President's Cabinet is likely to signal only that the government is aware of women, turning over several of the more important cabinet positions (Defense, Commerce, Treasury) to women and announcing that they have a mandate to assure that both government employees and suppliers cease discrimination would send a message that change is essential and inevitable. It seems likely that if the chairmen of IBM, Hewlett-Packard, Unisys, and Digital Equipment were to provide firm signals both within their firms and to suppliers that bias is hurting their firms and will no longer be tolerated, the reverberations would be felt throughout the electronics and office technology industries, if not societywide. Firms can accomplish a great deal by appointing women as line vice-presidents in powerful areas such as production and marketing and instructing them that bias will not be necessary nor tolerated.

Suggestions for Managers and Organizations

Can anything be done by the many (perhaps even the majority) individual lower-level managers who would prefer to make personnel decisions on the basis of ability rather than politics? Is it necessary for them to ignore self-interest or to go out on a limb? We are aware of the adage that revolutionary change can only be enjoyed by those who survive the revolution. Fortunately, there are some ways that have been suggested by our findings for managers both to prosper and to make bias-free decisions. Probably the most obvious is to ensure objective recognition of the abilities of subordinates (Hypothesis 11). Rather than leaving this valuable strategy to chance, the manager should encourage women subordinates to obtain that recognition from professional or other sources that is likely to be accepted by those to whom the manager is responsible. Having obtained the recognition, women should be further encouraged to publicize their unusual activities. This not only takes pressure off the manager for explaining his or her personnel decisions, but may greatly enhance the women's value to the firm.

Women can also be "safely" placed in either of two positions. They can be started in the less exposed areas of any operation—those that are well established (Hypothesis 7), internal (Hypothesis 8), highly supervised (Hypothesis 9), or stereotypically appropriate (Hypothesis 10). Alternatively, they can be asked to operate entrepreneurially, for instance, as project managers on low-risk projects (Hypothesis 1). If, in any situation, the women prove themselves or acquire the credentials accepted in the business, then this evidence can be used as the means to move them elsewhere quickly, just as with any other form of objective recognition. We are suggesting that a deliberate effort be made to help women acquire and take advantage of the credibility that society does not automatically accord them.

Suggestions for Individual Career Development

It would be tempting to recommend that women intent on developing their own careers begin with the leading firms and government organizations. If they are fortunate enough as to begin in a bias-free organization or to join a boss who is aware of and willing to resist pressure for discrimination, the leading organizations are in fact helpful. While lower levels in many larger and successful organizations are open to women and provide a way to obtain experience, upper and more meaningful positions, however, are still closed. We suspect that the type of organization or situation that can provide a major career push for most women is, ironically, the "secondary sector" or "niche player" firm. These are relatively weak firms and entrepreneurial ventures, often in commodity or cyclical industries, or nonessential suppliers. Because of their weakness, they must be careful to take advantage of the best available human resources. Although they might prefer to avoid upsetting their powerholders, they are often forced to take that risk, and certainly cannot afford to discriminate elsewhere. These firms have traditionally been most likely to put women at the top of seemingly safer and less demanding staff operations such as personnel (Hypothesis 10), to use women internally or when they seem to be closely supervised (Hypotheses 8 and 9), or to apply women in "safe" situations (Hypotheses 6 and 7), and are statistically more willing to move them into critical top line positions. Application of women in these roles will provide some with the experience to move into comparable positions with primary sector employers, or with the objective evidence of their ability needed to counter discrimination and to obtain more influence with their present employers (Hypothesis 11). Over the long run, we expect that the success of women in these positions will also gradually allay the fear of those managers who discriminate on the basis of unfounded rational bias.

REFERENCES

- Allen, W. R. (1979). Family roles, occupational statuses, and achievement orientations among Black women in the United States. *Signs, 4*, 670-686.
- Barnhill-Hayes, Inc. (1979). *Employer attitudes toward affirmative action*. Milwaukee: Author.
- Baskett, G. D. (1973). Interview decisions as determined by competency and attitude similarity. *Journal of Applied Psychology, 57*, 343-345.
- Bass, B. M. (1981). *Stogdill's handbook of leadership*. New York: Free Press.
- Becker, G. S. (1975). *Human capital*. New York: Columbia University Press.
- Brown, H. A., & Ford, D. L., Jr. (1977). An exploratory analysis of discrimination in the employment of Black MBA graduates. *Journal of Applied Psychology, 62*, 50-56.
- Campbell, J. P., & Pritchard, R. D. (1976). Motivation theory in industrial and organizational psychology. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 63-130). Chicago: Rand McNally.

- DeCotiis, T. A., & LeLouarn, J.-Y. (1981). A predictive study of voting behavior in a representative election using union instrumentality and work perceptions. *Organizational Behavior and Human Performance*, 27, 103-118.
- Dexter, C. R. (1979). Organizational determinants of occupational discrimination: Women managers in business. *Academy of Management Proceedings*, pp. 386-390.
- Dexter, C. R. (1985). Women and the exercise of power in organizations: From ascribed to achieved status. In L. Larwood, A. H. Stromberg, & B. A. Gutek (Eds.), *Women and work* (Vol. 1, pp. 239-258). Beverly Hills, CA: Sage.
- Dye, T. R., & Renick, J. (1981). Political power and city jobs: Determinants of minority employment. *Social Science Quarterly*, 62, 475-486.
- Eagly, A. H., & Wood, W. (1982). Inferred sex differences in status as a determinant of gender stereotypes about social influence. *Journal of Personality and Social Psychology*, 43, 915-928.
- Gealy, J., Larwood, L., & Elliott, M. P. (1979). Where sex counts: Effects of consultant and client gender in management consulting. *Group and Organization Studies*, 4, 201-211.
- Geis, F. L. (1983, April). *Women, sex-roles and achievement: The self-fulfilling prophecy*. Paper presented at the annual meeting of the Eastern Psychological Association, Philadelphia.
- Hansen, R. D., & O'Leary, V. E. (1984). Sex-determined attributions. In V. E. O'Leary, R. K. Unger, & B. S. Wallston (Eds.), *Women, gender, and social psychology*. Hillsdale, NJ: Lawrence Erlbaum.
- Hitt, M. A., Zikmund, W. G., & Pickens, B. A. (1982). Discrimination in industrial employment: An investigation of race and sex bias among professionals. *Work and Occupations*, 9, 217-231.
- Hollander, E. P. (1964). *Leaders, groups, and influence*. New York: Oxford University Press.
- Hollinger, R. C., & Clark, J. P. (1983). *Theft by employees*. Lexington, MA: Lexington Books.
- Hymowitz, C., & Schellhardt, T. D. (1986, March 24). The glass ceiling: Why women can't seem to break the invisible barrier that blocks them from the top jobs. *The Wall Street Journal*, 4, 1D-5D.
- Jones, E. E., & Davis, K. E. (1965). From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2). New York: Academic Press.
- Jones, E. E., & McGillis, D. (1976). Correspondent inferences and the attribution cube: A comparative reappraisal. In J. H. Harvey, W. J. Ikes, & R. F. Kidd (Eds.), *New directions in attribution research* (Vol. 1). Hillsdale, NJ: Lawrence Erlbaum.
- Kanter, R. M. (1977). *Men and women of the corporation*. New York: Basic Books.
- Kraiger, K., & Ford, J. K. (1985). A meta-analysis of ratee race effects in performance ratings. *Journal of Applied Psychology*, 70, 56-65.
- Larwood, L., & Blackmore, J. (1978). Sex discrimination in managerial selection: Testing predictions of the vertical dyad linkage model. *Sex Roles*, 4, 359-368.
- Larwood, L., & Gattiker, U. E. (1985). Rational bias and interorganizational power in the employment of management consultants. *Group and Organization Studies*, 10, 3-17.
- Larwood, L., & Gattiker, U. E. (1987). A comparison of the career paths used by successful men and women. In B. A. Gutek & L. Larwood (Eds.), *Women's career development* (pp. 129-156). Beverly Hills, CA: Sage.

- Larwood, L., Gutek, B., & Gattiker, U. E. (1984). Perspectives on institutional discrimination and resistance to change. *Group and Organization Studies*, 9, 333-352.
- Larwood, L., Szwajkowski, E., & Rose, S. (1988). Sex and race discrimination resulting from manager-client relationships: Applying the rational bias theory of managerial discrimination. *Sex Roles*, 18, 9-29.
- Larwood, L., Zalkind, D., & Legault, J. (1975). The bank job: A field study of sexually discriminatory performance on a neutral role task. *Journal of Applied Social Psychology*, 5, 68-74.
- Lockheed, M. E., & Hall, K. P. (1976). Conceptualizing sex as a status characteristic: Applications to leadership training strategies. *Journal of Social Issues*, 32(3), 111-124.
- Madden, J. F. (1985). The persistence of pay differentials: The economics of sex discrimination. In L. Larwood, A. H. Stromberg, & B. A. Gutek (Eds.), *Women and work* (Vol. 1, pp. 76-114). Beverly Hills, CA: Sage.
- Mai-Dalton, R. R., & Sullivan, J. J. (1981). The effects of manager's sex on the assignment to a challenging or a dull task and reasons for the choice. *Academy of Management Journal*, 24, 603-612.
- Matsui, T., Kagawa, M., Nagamatsu, J., & Ohtsuka, Y. (1977). Validity of expectancy theory as a within-person behavioral choice model for sales activities. *Journal of Applied Psychology*, 62, 764-767.
- Moscovici, S. (1985). Social influence and conformity. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (3rd ed., pp. 73-122). New York: Random House.
- Nieva, V. F., & Gutek, B. A. (1981). *Women and work: A psychological perspective*. New York: Praeger.
- Nkomo, S. (in press). Race and sex: The forgotten case of the Black female manager. In S. Rose & L. Larwood (Eds.), *Women's careers: Pathways and pitfalls*. New York: Praeger.
- Olian, J. D. (1986). Staffing. In E. A. Locke (Ed.), *Generalizing from laboratory to field settings* (pp. 13-42). Boston: Lexington Books.
- O'Neill, J. (1985). Role differentiation and the gender gap in wage rates. In L. Larwood, A. H. Stromberg, & B. A. Gutek (Eds.), *Women and work* (Vol. 1, pp. 76-114). Beverly Hills, CA: Sage.
- Parcel, T. L. (1979). Race, regional labor markets and earnings. *American Sociological Review*, 44, 262-279.
- Porter, L. W., & Roberts, K. H. (1976). Communication in organizations. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1553-1589). Chicago: Rand McNally.
- Quinn, R. P., Tabor, J. M., & Gordon, L. K. (1968). *The decision to discriminate*. Ann Arbor, MI: Institute for Social Research.
- Rosenbaum, J. E. (1984). *Career mobility in a corporate hierarchy*. Orlando, FL: Academic Press.
- Ross, M., & Fletcher, G. J. O. (1985). Attribution in social perception. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (3rd ed., pp. 73-122). New York: Random House.
- Schmitt, N., & Lippin, M. (1980). Race and sex as determinants of the mean and variance of performance ratings. *Journal of Applied Psychology*, 65, 428-435.
- Shepela, S. T., & Viviano, A. T. (1984). Some psychological factors affecting job segregation and wages. In H. Remick (Ed.), *Comparable worth and wage discrimination* (pp. 47-58). Philadelphia: Temple University Press.

- Szwajkowski, E., & Larwood, L. (1986). *Discrimination resulting from manager-client relationships: A test of the rational bias theory of managerial discrimination*. Paper presented at the annual meeting of the Academy of Management, Chicago.
- Taynor, J., & Deaux, K. (1973). When women are more deserving than men: Equity, attribution, and perceived sex differences. *Journal of Personality and Social Psychology, 28*, 474-486.
- Terborg, J. R., & Ilgen, D. R. (1975). A theoretical approach to sex discrimination in traditionally masculine occupations. *Organizational Behavior and Human Performance, 13*, 352-376.
- Turner, C. B., & Turner, B. F. (1981). Racial discrimination in occupations: Perceived and actual. *Phylon, 42*, 322-334.
- U.S. Bureau of Labor Statistics, Department of Labor. (1986, July). *Employment and earnings*. Washington, DC: Government Printing Office.
- U.S. Department of Labor. (1986). *The United Nations decade for women, 1976-1985: Employment in the United States*. Washington, DC: Government Printing Office.
- Vroom, V. H. (1964). *Work and motivation*. New York: John Wiley.
- Webber, R. A. (1970). Perceptions of interactions between superiors and subordinates. *Human Relations, 23*, 235-248.

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