

Social-Role Versus Structural Models of Gender and Influence Use in Organizations

A STRONG INFERENCE APPROACH

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We adopted a strong inference epistemological approach and confronted predictions derived from 2 competing paradigms that attempt to explain poor evaluations and slow organizational advancement of female managers as compared to male managers. Participants viewed a videotape of a manager (female, male) occupying identical roles in the organizational structure and using 1 of 2 forms of influence behaviors (direct or indirect). The prediction of the social-role model was that female managers would receive more negative evaluations than did male managers when using (sex-role incongruent) direct influence behaviors. The prediction of the structural model was that there would be no gender-based differences and there would be a main effect for influence use (because direct influence is more congruent with the managerial position than is indirect influence). Supporting the structural model, ratings of managerial power, leadership effectiveness, managerial attributes, and reactions to an influence attempt were affected by the type of influence used and not by gender.

Organizational researchers are becoming increasingly interested in investigating the impact of ongoing workforce composition changes on organizational dynamics and structure (Triandis, Kurowski, & Gelfand, 1994). One of the changes being scrutinized is the growing proportion of women entering the managerial workforce. Recent surveys indicate that women occupy ap-

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proximately 42% of all management positions in the United States (U.S. Bureau of the Census, 1994). However, despite the steady growth in the number of female managers, their positions tend to be low-wage assignments (Morrison & Von Glinow, 1990) and have less formal power and authority (Jacobs, 1992; U.S. Department of Labor, 1995) than those held by male executives. In addition, women are clearly underrepresented in powerful, top management positions (Powell, 1993), filling less than 5% of the most coveted top management positions at the largest publicly traded corporations in the United States (U.S. Department of Labor, 1991).

Women's inability to secure top-level management positions has been attributed to the existence of invisible artificial barriers, commonly referred to as the "glass ceiling" (Morrison, White, & Van Velsor, 1987). Numerous investigations have identified factors that contribute to the glass ceiling effect and hinder women's organizational advancement. Some of the obstacles that may block women's entry into the highest layers of corporate hierarchies include (a) lack of mentoring (Geller & Hobfoll, 1993); (b) differential training (Tharenou, Latimer, & Conroy, 1994); (c) differential opportunities for career development (Ohlott, Ruderman, & McCauley, 1994); (d) biased performance standards (Fiske, Bersoff, Borgida, Deaux, & Heilman, 1991); and (e) limited access to informal communication networks (Ibarra, 1993). However, despite this variety of hurdles, the Glass Ceiling Commission concluded that the chief obstacle blocking women's corporate advancement is prejudice and preconceptions that female executives are less able and less effective than their male counterparts (U.S. Department of Labor, 1995). In short, the main factor contributing to women's slow organizational advancement is that female managers seem to be perceived and evaluated as being less effective and competent than male managers.

THE RELEVANCE OF INFLUENCE FOR ORGANIZATIONAL ADVANCEMENT AND SUCCESS

An additional factor identified as a determinant of organizational advancement and success is the use of influence. French and Raven (1959) defined power as the ability or potential of an agent to alter a target's behavior.

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ior, intentions, attitudes, beliefs, emotions, or values. Alternatively, influence is the use of power. Thus, whereas power refers to potential, influence refers to the actual use of power, for example, in the form of influence tactics such as threats—use of coercive power—and promises—use of reward power (Aguinis, Nesler, Quigley, Lee, & Tedeschi, 1996).

Managerial advancement and success are largely dependent on a manager's effective use of influence (Pfeffer, 1981; Yukl, 1994; Yukl, Falbe, & Youn, 1993). For instance, in a longitudinal study investigating power in organizations, Ragins and Sundstrom (1989) posited a "path to power" hypothesis directly linking managerial organizational advancement to the development, use, and acquisition of power. In addition, the potential to secure salary increases (Dreher, Dougherty, & Whitely, 1989) and gain favorable performance ratings (Kipnis & Schmidt, 1988) are largely affected by a manager's effective use of influence behaviors. Moreover, effective leadership frequently is defined as the ability to influence employees so that they are committed to accomplishing organizational goals (Yukl, 1994).

GENDER-BASED DIFFERENCES REGARDING INFLUENCE EXPECTATIONS AND BEHAVIOR

Because the effective use of influence in organizations is a critical determinant of advancement and success, an important issue addressed by organizational researchers is whether the glass ceiling effect is, at least in part, due to gender-based differences, specifically regarding influence expectations and behavior. That is, are there differential expectations regarding how women and men *should* use influence behaviors? Do women and men display different influence behaviors? And, if there are any differences, do potential gender-based differences regarding expectations of influence and actual influence use affect how female and male managers are evaluated?

Investigations regarding gender and influence behavior suggest that men and women are generally expected to use forms of influence that are related to gender-based stereotypes (Carli, 1989, 1990; Cowan, Drinkard, & MacGavin, 1984) or gender roles (Eagly & Johnson, 1990). Research conducted in the early 1970s revealed that men are expected to use more direct and assertive influence behaviors than are women (Johnson, 1976). These expectations seem to prevail at present. For instance, a study using a sample of working adults showed that men are expected to use assertion, jokes, or threats—that is, direct tactics—when influencing others to complete a work objective; alternatively, women are expected to use charm, appearance, ingratiation, and compliments—that is, indirect tactics (DuBrin, 1991).

Perceptions and stereotypes that men use direct forms of influence whereas women choose indirect tactics may, to some extent, reflect true differences between the genders. More specifically, empirical research has demonstrated the tendency for men and women to use stereotypical forms of influence behavior in both interpersonal (Falbo & Peplau, 1980; Maccoby, 1988) and work (Eagly & Johnson, 1990; Mainiero, 1986) settings. In work situations, for example, women report using personal/dependent tactics and negotiation (Offerman & Kearney, 1988; Offerman & Schrier, 1985); acquiescence (Mainiero, 1986); suggesting and smiling (Steil & Weltman, 1992); and altruism and rational tactics (Harper & Hirokawa, 1988). Alternatively, men report using tactics such as offering rewards, coercion (Offerman & Kearney, 1988; Offerman & Schrier, 1985), and punishments (Harper & Hirokawa, 1988).

Although evidence for gender-based differences regarding influence expectations and use is seemingly convincing, several additional investigations have failed to find gender-based differences on the reported enactment of influence behaviors. This lack of difference in how women and men use influence has been found in both interpersonal (Carli, 1989; Sagrestano, 1992) and organizational settings (Dreher et al., 1989; Kipnis, Schmidt, & Wilkinson, 1980; Yukl & Tracey, 1992). A frequently posited explanation for the null findings regarding gender-based differences in the use of influence is that structural or situational variables such as relationship status (Falbo & Peplau, 1980; Sagrestano, 1992) and organizational position (Schlueter & Barge, 1993) govern an individual's selection of influence behaviors to a greater extent than does gender.

Based on the aforementioned empirical evidence, there exist two competing theories that attempt to explain the existence, or lack thereof, of gender-based differences in expectations as well as use of influence behaviors: (a) the *social-role model* (see Eagly, 1987; Gutek, 1993; Nieva & Gutek, 1981; Schlueter & Barge, 1993); and (b) the *structural model* (see Ely, 1995; Kanter, 1977; Mainiero, 1986; Nieva & Gutek, 1981; Riger & Galligan, 1980; Schlueter, Barge, & Blankenship, 1990). The following sections outline the social-role model and the structural model regarding the relation between gender and the use of influence in organizations.

THE SOCIAL-ROLE MODEL

The social-role model, often referred to as gender-role theory (Eagly, 1987) or gender-role socialization (Schlueter & Barge, 1993), posits that gender-based differences in choice of influence behaviors as well as perceptions of appropriateness of influence use are a result of gender-role expecta-

tions that "spill over" to organizational settings (Nieva & Gutek, 1981). Generally, these expectations stem from culturally defined gender-roles (e.g., husband, wife, professor, student, doctor, nurse), which define a set of expectations for male and female behavior (Eagly, 1987). Status roles, for instance, may lead people to have unconscious, automatic expectations that men occupy positions of authority and use high-status behaviors, whereas women reside in subordinate roles and, therefore, use low-status behaviors.

High-status behaviors have been shown to be more aligned with masculine stereotypes, and low-status behaviors have been found to be closer to feminine stereotypes (Mainiero, 1986; Sagrestano, 1992). Additionally, the traits and attributes necessary for managerial success resemble the characteristics, attitudes, and temperaments of the masculine gender-role more than the feminine gender-role (Brenner, Tomkiewicz, & Schein, 1989; Heilman, Block, Martell, & Simon, 1989; Schein, 1973; 1975; Schein, Mueller, & Jacobson, 1989). Consequently, numerous researchers have argued that women's social status and gender-role are incompatible with the organizational status and role of a manager (Eagly, Karau, & Makhijani, 1995; Eagly, Makhijani, & Klonsky, 1992; Ragins & Sundstrom, 1989). This role incompatibility may create a dilemma for working women with regard to which set of role expectations they should fulfill: If they fulfill managerial role expectations, they may violate status and gender-role expectations; yet, if they confirm status and gender-role expectations, they may not be perceived as effective managers (Eagly et al., 1992).

In sum, according to the social-role model, women may fail to climb the corporate ladder because gender and status role expectations (a) encourage the use of influence behaviors congruent with expectations but not associated with effective management (i.e., indirect influence behaviors); and (b) discourage the use of influence behaviors incongruent with expectations but associated with effective management (i.e., direct influence behaviors).

THE STRUCTURAL MODEL

The structural model suggests that organizational position, rather than gender-role expectations, affects the choice for influence behaviors as well as perceptions of appropriateness of influence use (Mainiero, 1986; Riger & Galligan, 1980; Schlueter et al., 1990). In the structural model, individual traits and behaviors are de-emphasized as predictors of managerial effectiveness and upward mobility (Riger & Galligan, 1980). Instead, this model posits that influence use is dictated by organizational status, role, and degree of perceived power (Fagenson, 1990; Farmer & Aguinis, 1998; Kanter, 1977;

Schlueter et al., 1990). This model contends that influence behaviors are a result of the organizational structure (Fagenson, 1990); that is, male and female managers use influence behaviors relative to their amount of power in the organization (Schlueter & Barge, 1993; Schlueter et al., 1990).

Because influence use is a consequence of structural power rather than a consequence of gender, the structural model claims that women use indirect and weak forms of influence because they typically occupy low-status and less powerful organizational positions than men. Consequently, these low-power positions provide them with fewer opportunities to use direct and strong forms of influence. This contention was supported by Falbo (1982) and others (e.g., Howard, Blumstein, & Schwartz, 1986), who documented that the use of influence tactics in interpersonal relationships was related to the balance of power within the relationship. For instance, Falbo and Peplau (1980) determined that individuals who perceived themselves as possessing more power used bilateral and direct influence tactics, whereas individuals who perceived themselves as having less power relied on unilateral and indirect tactics. Similar results were obtained by Mainiero (1986) in a work setting: Working men and women in weak and dependent positions reported using acquiescence and weak influence tactics.

Overall, the structural model posits that studies detecting gender-based differences in the use of influence behaviors actually may be detecting differences regarding gender-based structural power (Fagenson, 1990; Sagrestano, 1992). Supporting this contention, Brass and Burkhardt (1993) concluded that power, or the potential to influence, resides in the organizational position, not in the incumbent. The "position," according to Brass (1984), is recognized by superiors and subordinates as the strongest source of power (i.e., ability to influence) as well as the greatest source of constraints on an individual's use of influence (Brass & Burkhardt, 1993). Stated differently, the organizational position provides the context within which managers operate to exercise influence and, in addition, is the source for expectations and interpretations of appropriateness of influence behaviors. For instance, high-status individuals are expected to use stronger, more direct (Kipnis et al., 1980), and more assertive (Brass & Burkhardt, 1993) influence tactics than are lower-status individuals.

In sum, the structural model does not interpret apparent gender-based differences regarding influence expectations and behaviors as the primary contributing factor to women's lack of organizational advancement. Instead, women's lack of upward mobility is perceived as a consequence of work structures and organizational practices, such as the distribution of power, rewards, and opportunities.

THIS STUDY AND HYPOTHESES

Some authors argue that the social-role and structural models potentially could be integrated (Fagenson, 1990). However, these two approaches clearly lead to contrary predictions regarding the relation between gender and the use of influence in organizations. The social-role model predicts that gender-role expectations affect the evaluation, and eventual organizational advancement, of female managers. Female managers using gender incongruent (i.e., direct) influence behaviors are predicted to receive less favorable evaluations than male managers using gender congruent (i.e., direct) influence behaviors. On the other hand, the structural model predicts that organizational role expectations override gender-role expectations. Therefore, female managers are predicted to be evaluated similarly to male managers when they hold equivalent positions in the organization and when they use similarly direct or similarly indirect influence behaviors. In addition, regardless of gender, a manager is predicted to be evaluated more positively when using organizational role congruent (direct) rather than organizational role incongruent (indirect) influence behaviors.

Given these opposing predictions regarding the relation between gender and the use of influence in organizations, the purpose of this study was to compare and evaluate experimentally the relative validity of the social-role and structural theoretical models for predicting how female managers are evaluated compared to male managers. To accomplish this goal, we adopted a strong inference epistemological approach (Platt, 1964). Strong inference consists of devising alternative hypotheses, devising a crucial experiment, and performing the experiment with a clean outcome.

To compare the competing predictions of the social-role and structural models, we designed an experiment in which female and male managers held identical organizational/structural positions and used (a) influence behaviors stereotypically associated with men (i.e., direct); and (b) influence behaviors stereotypically associated with women (i.e., indirect). In this way, we were able to assess the effects of gender-role expectations on the evaluations of female managers, controlling for the potential confounding effects of organizational role expectations. Specifically, this study examined the effects of manipulating (a) a manager's gender; and (b) a manager's influence use (i.e., direct or indirect) on managerial evaluations regarding four constructs known to affect organizational advancement and success. Those constructs are evaluations of (a) managerial power; (b) leadership effectiveness; (c) managerial attributes associated with managerial success; and (d) three types of influence outcomes (commitment, compliance, and resistance).

Overall, the social-role model predicts that female managers using direct influence behaviors will be evaluated more negatively than male managers using direct influence behaviors. Alternatively, the structural model predicts that, because the female and male managers hold identical organizational positions, they will be evaluated similarly. Moreover, the structural model predicts that a manager using direct influence behaviors will be evaluated more positively than will a manager using indirect influence behaviors, regardless of gender, because the use of direct influence is more congruent with the managerial role than the use of indirect influence. Next, we describe each of the four types of managerial evaluations investigated and their relation with organizational advancement and success. In addition, as required by a strong inference approach, we delineate specific competing hypotheses derived from the social-role and the structural models.

MANAGERIAL POWER

Power is defined as the ability to influence others (French & Raven, 1959). A number of researchers have reported that managerial success and subsequent organizational advancement is determined by how power is perceived (cf. Aguinis, Nesler, Quigley, & Tedeschi, 1994; Ragins & Sundstrom, 1989; Yukl et al., 1993). We operationalized power by using French and Raven's power-base taxonomy: reward, coercive, legitimate, referent, and expert. Reward power is based on the target's belief that the manager has the ability to provide him or her with desired tangible or intangible objects; coercive power is based on the target's belief that the manager has the ability to punish him or her; legitimate power is based on the target's perception that the manager has the legitimate right to influence the target and that he or she is obligated to comply; referent power is based on the target's identification with or desire to be associated with the manager; and expert power is based on the target's belief that the manager can provide him or her with special knowledge. Credibility, which often is considered an additional power base (Nesler, Aguinis, Quigley, & Tedeschi, 1993), is based on the perception that the manager is consistently both honest and accurate in his or her communications with subordinates.

Hypothesis 1a (Social-Role Model): Because a female manager using direct influence behaviors violates gender-role expectations, evaluations of power and credibility will be lower as compared to a male manager using direct influence behaviors.

Hypothesis 1b (Structural Model): Male and female managers occupying the same organizational position will be evaluated similarly regarding the power bases and credibility. Also, because using direct influence behaviors is congru-

ent with the managerial organizational role, direct managers will be evaluated as possessing more power and credibility than indirect managers.

LEADERSHIP EFFECTIVENESS

Leadership effectiveness has been defined in many different ways (Yukl, 1994). Following Ragins (1989), we define overall leadership effectiveness as a multidimensional construct consisting of nine dimensions: support, motivation, functionality, power, delegation, planning, decision making, problem solving, and team building. Many managerial performance appraisal instruments include one or more of these dimensions. Thus, those managers who are evaluated positively regarding leadership effectiveness are more likely to advance.

Hypothesis 2a (Social-Role Model): Because a female manager using direct influence behaviors violates gender-role expectations, evaluations of leadership effectiveness will be lower as compared to a male manager using direct influence behaviors.

Hypothesis 2b (Structural Model): Male and female managers occupying the same organizational position will be evaluated similarly regarding leadership effectiveness. Also, because using direct influence behaviors is congruent with the managerial organizational role, direct managers will be evaluated more positively regarding leadership effectiveness than will indirect managers.

MANAGERIAL ATTRIBUTES

Numerous studies have demonstrated that there exist specific attributes that are associated with and attributed to successful managers. More specifically, there are six traits that have been systematically attributed to effective managers: self-confidence, emotional stability, industriousness, leadership, logic, and responsibility. These attributes share two characteristics: (a) previous research has demonstrated that they are systematically attributed to effective managers (e.g., Brenner et al., 1989; Heilman et al., 1989; Powell & Butterfield, 1989; Schein, 1973, 1975); and (b) they are included in the most popular adjective checklist instruments, for example, Bem Sex Role Inventory (Bem, 1974), Adjective Check List (Gough & Heilbrun, 1965), Personal Attributes Questionnaire (Spence & Helmreich, 1978).

Hypothesis 3a (Social-Role Model): Because a female manager using direct influence behaviors violates gender-role expectations, evaluations regarding six traits associated with managerial effectiveness (self-confidence, emotional stability, industriousness, leadership, logic, and responsibility) will be lower as compared to a male manager using direct influence behaviors.

Hypothesis 3b (Structural Model): Male and female managers occupying the same organizational position will be evaluated similarly regarding six attributes considered to be related to managerial effectiveness. Also, because using direct influence behaviors is congruent with the managerial organizational role, direct managers will be evaluated more positively regarding these six attributes than will indirect managers.

INFLUENCE OUTCOMES

Influence outcomes refer to whether a manager is successful at influencing his or her subordinates. Yukl and his colleagues (Yukl, 1994; Yukl & Tracey, 1992) have identified three types of influence outcomes: commitment, compliance, and resistance. Commitment is defined as "an outcome in which the target person internally agrees with a decision or request from the agent and makes a great effort to carry out the request" (Yukl, 1994, p. 194). Compliance refers to "an outcome in which the target is willing to do what the agent asks but is apathetic rather than enthusiastic about it and will make only a minimal effort" (Yukl, 1994, p. 194). Finally, resistance describes "an outcome in which the target person is opposed to the proposal or request, rather than merely indifferent about it, and actively tries to avoid carrying it out" (Yukl, 1994, pp. 194-195). Thus, commitment is considered to be a more positive outcome as compared to compliance and resistance. Managers who have committed subordinates are considered to be good leaders (Yukl, 1994).

Hypothesis 4a (Social-Role Model): Because a female manager using direct influence behaviors violates gender-role expectations, she will encounter more resistance and less commitment than a male manager using direct influence behaviors.

Hypothesis 4b (Structural Model): Male and female managers occupying the same organizational position will encounter a similar degree of resistance, compliance, and commitment. Also, because using direct influence behaviors is congruent with the managerial organizational role, direct managers will encounter more commitment and less compliance and resistance than will indirect managers.

METHOD

OVERVIEW

Participants viewed a videotape of a female or male manager using indirect or direct influence behaviors and then answered questions regarding

(a) managerial power, (b) leadership effectiveness, (c) managerial attributes, and (d) influence outcomes.

PARTICIPANTS

A sample of 88 nontraditional undergraduate students (45 women and 43 men) from a large urban, nonresidential university in the western United States participated in partial fulfillment of a course requirement. The participants' mean age was 21.97 years ($SD = 4.67$), and 97.70% had work experience ($M = 5.48$ years, $SD = 3.30$). In addition, 40.90% of those who had work experience held a supervisory position with a mean tenure of 2.56 years ($SD = 1.80$).

PROCEDURE AND DESIGN

Participants were randomly assigned to experimental conditions and viewed one of four videotapes in groups of 3 to 6; the videotapes ranged in length from 2 min, 30 s, to 2 min, 40 s. The tapes depicted either a male (Dave) or a female (Kathy) manager making requests of subordinates and using direct or indirect influence. Thus, this resulted in a 2×2 (Managerial Gender: female, male; Influence Use: direct, indirect) between-participants design. Before viewing the videotape, participants were informed that Kathy or Dave were customer service managers at "Diamond Corporation" and that they were meeting with their subordinates. No other information was provided about Kathy or Dave. Subsequent to viewing the videotape, participants were asked to evaluate the manager's power, leadership effectiveness, and the six managerial attributes. Finally, participants were asked to respond to items regarding influence outcomes (resistance, commitment, and compliance). To measure influence outcomes, they were asked to assume that they were one of Kathy's (or Dave's) subordinates, and that upon arriving at the office one morning, Kathy (or Dave) meets with them and requests that they accomplish a specific task. Then, they were asked to react to the request.

MATERIALS

Videotapes. Scripts (see Appendix A and Appendix B) were created in which a manager made requests of subordinates using either direct/assertive or indirect/unassertive influence behaviors. The specific tactics used to create the script for the direct influence use videotape were obtained from three sources. First, Kipnis et al. (1980) described managers using direct influence

as demanding that subordinates comply, setting time deadlines for compliance, pointing out the required rules and repeatedly reminding subordinates of requests. Second, Falbo and Peplau (1980) and Cowan et al. (1984) described managers using direct/assertive influence as asking, telling, reasoning with, stating the importance and persistently repeating when making requests of subordinates. Lastly, the nonverbal behavior of direct eye contact also was included because it is associated with assertion (Dovidio, Ellyson, Keating, Heltman, & Brown, 1988).

The tactics used to create the indirect influence use videotape were drawn from the same three sources as the direct condition. Falbo and Peplau (1980) and Cowan et al. (1984) described indirect influence use as including verbal manipulation (flattery); positive affect (put in a good mood); evasion (evades authority); and use of an advocate, helpless plea, or both. Carli (1990) indicated that an indirect/unassertive use of influence also is characterized by tentative language including intensifiers, hedges, and disclaimers. Intensifiers (Lakoff, 1975) provide emphasis (e.g., "like so," "really," "very"), and hedges serve to weaken the strength of the statement (e.g., "kind of," "you know," "maybe") as do disclaimers (e.g., "I mean," "I suppose"). In addition, the nonverbal behavior of indirect eye contact also was included (cf. Dovidio et al., 1988).

The two resulting scripts were utilized to create four videotapes: male-direct, male-indirect, female-direct, and female-indirect. Potential confounding variables such as actor demographics were held constant across all conditions. Specifically, the actors portraying Kathy and Dave were similar regarding (a) age (36 and 38 respectively); (b) ethnicity (Caucasian); (c) hair color (brown); (d) eye color (blue); and (e) height and build (Kathy was 5 ft 11 in. and of medium/large build, and Dave was 6 ft 2 in. and of medium/large build). Regarding clothing, the actors were dressed in a way that did not call attention to their physical presence or attractiveness: Dave wore a suit and tie and Kathy wore a solid-color business dress.

Other features of the videotapes were also chosen with great care so as to minimize the impact of factors that may threaten the validity of the gender, influence use manipulations, or both. The videotapes began with a scene portraying Kathy or Dave sitting at the head of a conference table with two female and two male subordinates sitting around the table. The four subordinates ranged in age from 25 to 40, and the same actors appeared in all four conditions. To ensure that study participants' perceptions and responses were not affected by subordinates' reactions or nonverbal cues, when Kathy or Dave began speaking, the subordinates turned their faces sideways showing that they were giving Kathy or Dave their full attention. Additionally, when

Kathy or Dave began speaking, the camera focused only on Kathy or Dave, with the four subordinates out of view.

Finally, extensive training and rehearsal work was needed before the final versions of the videotapes were successfully completed. First, the actors were trained on the enactment of the direct and indirect conditions. Second, several rehearsal sessions took place before the initial shooting of the videotapes. The two authors independently watched and evaluated the similarity between each videotape and its script after each shooting. The fourth iteration resulted in videotapes consensually considered to adequately reflect the intended manipulations by both authors.

MEASURES

After viewing the tape, participants were asked to evaluate the manager they had seen by responding to a questionnaire (Table 1 shows the items used to measure the variables described subsequently). All ratings were made on 9-point Likert-type scales, ranging from 1 (*agree*) to 9 (*disagree*). Note, however, that to be more consistent with previous research and to facilitate the interpretation of results, we recoded the scores so that higher values represent greater item endorsement (i.e., 1 = *disagree* and 9 = *agree*).

Power bases perceptions. We measured French and Raven's (1959) five bases of power (reward, coercive, referent, expert, and legitimate) using a modified version of Hinkin and Schriesheim's (1989) power scales as adapted by Nesler et al. (1993). Additionally, credibility was measured using five items from Nesler et al. (1993).

Leadership effectiveness. To measure overall perceived leadership effectiveness, we included a four-item leadership effectiveness scale developed by Ragins (1989). The scale is a global measure of leadership effectiveness developed from 46 behaviorally based items of leadership effectiveness. The behaviorally based items focused on nine leadership dimensions: support, motivation, functionality, power, delegation, planning, decision making, problem solving, and team building.

Managerial attributes. We measured the following six attributes: self-confidence, emotional stability, industriousness, leadership, logic, and responsibility. These attributes are included in the most popular adjective checklist instruments and typically are measured using one-item scale, for example, Bem Sex Role Inventory (Bem, 1974), Adjective Check List

(Gough & Heilbrun, 1965), and the Personal Attributes Questionnaire (Spence & Helmreich, 1978). We measured perceptions regarding each of the attributes by asking participants to rate whether they believed each attribute described the manager.

Influence outcomes. We created new items to measure commitment, resistance, and compliance, as defined by Yukl and colleagues (Yukl, 1994; Yukl & Tracey, 1992).

RESULTS

CHECK ON EFFECTIVENESS OF THE INFLUENCE USE MANIPULATION

Four items were included in the questionnaire (see Table 1) to assess the effectiveness of the influence use manipulation (indirect/direct). We conducted a Gender \times Influence Use analysis of variance (ANOVA) using a composite of these four items as the dependent variable (two items were reflected before the analysis). As expected, there was a main effect of influence use, $F(1, 84) = 188.03, p < .001$, such that the managers in the direct conditions were perceived as being more direct than those in the indirect conditions ($M_s = 7.42$ and 2.94 , respectively). Reassuringly, this ANOVA yielded non-significant results for the main effect of gender and the Gender \times Influence Use interaction. These results confirmed the effectiveness of the influence use experimental manipulation and that the influence manipulation was not confounded with the gender manipulation.

PSYCHOMETRIC PROPERTIES OF THE SCALES

Table 1 shows reliability estimates for all scales utilized. Replicating previous findings (Aguinis, Simonsen, & Pierce, 1998; Nesler, Aguinis, Quigley, Lee, & Tedeschi, in press; Nesler et al., 1993), items measuring the five French and Raven (1959) power bases and the credibility power base showed reliability estimates exceeding .80. The leadership effectiveness scale also showed excellent reliability ($\alpha = .93$). Of the three scales measuring influence outcomes (commitment, resistance, and compliance), resistance reached the .70 reliability value recommended for newly developed scales (Nunnally & Bernstein, 1994), but commitment and compliance did not.

TABLE 1
Scale Items and Cronbach's Alpha Reliability Estimates (N = 88)

<i>Scale Items</i>	<i>α</i>
Influence Use manipulation checks	.89
Kathy is direct in her requests to her subordinates.	
Kathy is assertive when making requests of her subordinates.	
Kathy is indirect in her requests to her subordinates.	
Kathy is unassertive when making requests of her subordinates.	
Power bases	
Coercive power	.82
Kathy can give her subordinates undesirable job assignments.	
Kathy can make her subordinates' work difficult for them.	
Kathy can make things unpleasant on the job.	
Kathy can make being at work difficult.	
Expert power	.83
Kathy can give her subordinates good technical suggestions.	
Kathy can share with her subordinates her considerable experience and/or training.	
Kathy can provide her subordinates with sound job-related advice.	
Kathy can provide her subordinates with needed technical knowledge.	
Legitimate power	.89
Kathy can make her subordinates feel that they have commitments to meet.	
Kathy can make her subordinates feel like they should satisfy their job requirements.	
Kathy can give her subordinates the feeling that they have responsibilities to fulfill.	
Kathy can make her subordinates recognize that they have tasks to accomplish.	
Referent power	.92
Kathy can make her subordinates feel valued.	
Kathy can make her subordinates feel like she approves of them.	
Kathy can make her subordinates feel personally accepted.	
Kathy can make her subordinates feel important.	
Reward power	.84
Kathy can increase her subordinates' pay level.	
Kathy can influence her subordinates' getting a pay raise.	
Kathy can provide her subordinates with special benefits.	
Kathy can influence her subordinates' getting a promotion.	
Credibility	.86
Kathy's subordinates can rely on what she says.	
Kathy does what she says she will do.	
Kathy follows up on what she says.	
Kathy tells the truth.	
Kathy's employees can believe what she tells them.	
Leadership effectiveness	.93
Kathy is an effective leader.	
Kathy displays effective leader behaviors.	
Kathy displays strong leadership abilities.	
Kathy is one of the best leaders in the organization.	

(continued)

TABLE 1 Continued

Scale Items	α
Managerial attributes ^a	—
Kathy could be described as a leader.	
Kathy could be described as self-confident.	
Kathy could be described as industrious.	
Kathy could be described as responsible.	
Kathy could be described as logical.	
Kathy could be described as emotionally stable.	
Influence outcomes	
Commitment	.57
I will make a great effort to carry out the task.	
I will internally agree with Kathy's task.	
I will implement the task effectively.	
Compliance	.44
I will do what Kathy asks but will make only a minimal effort to carry out the task.	
I am not convinced that Kathy's task is the best thing to do or even that it will be effective for accomplishing its purpose.	
I will carry out the task but will be apathetic about it.	
Resistance	.82
I will make excuses about why the task cannot be carried out.	
I will try to persuade Kathy to withdraw or change the task.	
I will ask higher authorities to overrule Kathy's task.	
I will delay acting in the hope that Kathy will forget about the task.	
I will make a pretense of complying but try to sabotage the task.	
I will refuse to carry out the task.	

NOTE: Items are grouped for presentation purposes. The questionnaire included the items in random order. The name Kathy was replaced by Dave in the male condition. Individual items were rated on 9-point scales ranging from 1 (*agree*) to 9 (*disagree*), with lower scores representing a greater endorsement of the items. However, to be more consistent with previous research and to facilitate the interpretation of results, we recoded all responses reported in the article so that higher values represent greater item endorsement (i.e., 1 = *disagree* and 9 = *agree*).

a. Each of the six managerial attributes was measured using one-item scales.

DATA ANALYSIS STRATEGY AND TESTS OF COMPETING HYPOTHESES

To test Hypothesis 1a versus 1b, 3a versus 3b, and 4a versus 4b, we conducted three multivariate analyses of variance (MANOVAs). In these analyses, the two independent variables were managerial gender and managerial influence use. Each MANOVA included one of the following sets of dependent variables: (a) power bases ratings (six variables: reward, coercive, legiti-

mate, referent, expert, and credibility); (b) managerial attributes ratings (six variables: self-confidence, emotional stability, industriousness, leadership, logic, and responsibility); and (c) influence outcomes (three variables: resistance, commitment, and compliance). These three MANOVAs were followed up by univariate ANOVAs.

To test Hypothesis 2a versus 2b, we conducted an ANOVA using managerial gender and managerial influence use as independent variables and leadership effectiveness ratings as the dependent variable.¹

Overall, the social-role model predicts an interaction between gender and influence style (i.e., the female-direct condition should be rated more negatively than the male-direct condition, and the female-indirect condition should be rated more positively than the male-indirect condition). On the other hand, the structural model predicts a main effect for influence use (i.e., the direct managers show organizational role congruent influence behaviors and, therefore, should be evaluated more positively than the indirect managers), and no main effect for gender nor for the Gender \times Influence Use interaction (i.e., the female and male managers hold the same position and, therefore, should be evaluated similarly).

EFFECTS ON MANAGERIAL POWER: HYPOTHESIS 1A VERSUS HYPOTHESIS 1B

The MANOVA with the six power bases as the dependent variables provided virtually complete support for Hypothesis 1b and virtually total lack of support for Hypothesis 1a. Wilks's lambda for the main effect of gender was .90, $F(6, 79) = 1.41, p > .05$; Wilks's lambda for the main effect of influence style was .44, $F(6, 79) = 16.69, p < .05$; and Wilks's lambda for the Gender \times Influence Style interaction was .87, $F(6, 79) = 2.01, p > .05$. Follow-up univariate ANOVAs showed that there was a main effect for influence use for all six power bases, there was no main effect for gender for five of the six power bases (referent, coercive, legitimate, expert, and credibility), and there was no Gender \times Influence Use interaction for five of the six power bases (see Table 2).

An examination of the means (note that higher ratings represent greater item endorsement) indicates that the direct manager was perceived as having more reward ($M = 5.89$), coercive ($M = 6.32$), legitimate ($M = 7.51$), and expert ($M = 5.87$) power, and as being more credible ($M = 6.62$) than the indirect manager (M s = 4.99, 4.83, 5.01, 4.59, and 4.80, respectively). Alternatively, the indirect manager was perceived as having more referent power ($M = 5.94$) than the direct manager ($M = 4.73$).

TABLE 2

Analysis of Variance for the Effects of Gender and Influence Use on Power Bases, Leadership Effectiveness, Managerial Attributes, and Influence Outcome Ratings

Source	df	Power Bases Ratings $F [\eta^2]$					Leadership Effectiveness Ratings	
		Referent	Reward	Coercive	Legitimate	Expert	Credibility	$F \quad \eta^2$
Gender (G)	1	.00 [.00]	7.02* [.08]	1.13 [.01]	2.73 [.03]	.55 [.01]	2.91 [.03]	.05 .00
Influence Style (IS)	1	6.29* [.07]	5.53* [.06]	15.34** [.16]	57.31** [.41]	9.85** [.10]	34.57** [.29]	64.74** .46
G \times IS	1	.83 [.01]	.00 [.00]	4.57* [.05]	2.63 [.03]	.08 [.00]	.43 [.01]	.04 .00
S within-group error	84	(5.11)	(3.23)	(3.21)	(2.40)	(3.65)	(2.10)	(1.34)

Source	df	Managerial Attributes Ratings $F [\eta^2]$					Influence Outcomes Ratings $F [\eta^2]$	
		Self-Confident	Emotionally Stable	Industrious	Leader	Logical	Responsible	Resistance
Gender (G)	1	1.41 [.02]	.29 [.00]	.07 [.00]	.04 [.00]	2.43 [.03]	.00 [.00]	.60 [.01]
Influence Style (IS)	1	70.29** [.45]	58.68** [.41]	48.69** [.37]	102.59** [.55]	39.59** [.32]	26.56** [.24]	16.47** [.16]
G \times IS	1	.22 [.00]	.00 [.00]	.74 [.01]	.16 [.00]	.00 [.00]	.66 [.00]	.37 [.00]
S within-group error	84	(4.76)	(3.51)	(3.50)	(3.53)	(3.82)	(4.01)	(2.99)

NOTE: Values enclosed in parentheses represent mean square errors. $N = 88$ for all ANOVAs (23 female-direct, 22 female-indirect, 22 male-direct, 21 male-indirect). * $p < .05$. ** $p < .01$.

The main effect of gender for reward power indicates that the female manager was perceived as having more reward power than the male manager ($M_s = 5.94$ and 4.73 , respectively). The Gender \times Influence Style interaction for coercive power suggests that the female-direct and male-direct were perceived as having similar levels of coercive power ($M_s = 6.13$ and 6.52 , respectively), but the female-indirect manager was perceived as having more coercive power than the male-indirect ($M_s = 5.43$ and 4.19 , respectively).

EFFECTS ON LEADERSHIP EFFECTIVENESS RATINGS: HYPOTHESIS 2A VERSUS HYPOTHESIS 2B

In support of Hypothesis 2b over Hypothesis 2a, results of the ANOVA using leadership effectiveness ratings as the dependent variables resulted in a main effect for influence use, no main effect for gender, and no Influence Use \times Gender interaction (see Table 2). The female-direct manager was not perceived more negatively than the male-direct manager. On the other hand, a manager using a direct influence style was perceived as being more effective ($M = 5.23$) than a manager using an indirect style ($M = 2.17$), regardless of gender.

EFFECTS ON MANAGERIAL ATTRIBUTES RATINGS: HYPOTHESIS 3A VERSUS HYPOTHESIS 3B

In support of Hypothesis 3b and not supporting Hypothesis 3a, the MANOVA with the six managerial attributes ratings as dependent variables resulted in a Wilks's lambda for the main effect of gender of .93, $F(6, 79) = 1.05$, $p > .05$; a Wilks's lambda for the main effect of influence style of .37 $F(6, 79) = 22.43$, $p < .05$; and a Wilks's lambda for the Gender \times Influence Style interaction of .96, $F(6, 79) = .52$, $p > .05$. Table 2 shows the results for the follow-up ANOVAs. These results indicate that the female manager was not perceived as lacking attributes critical for managerial success when both the male and female managers used a direct influence style.

An examination of the means indicates that the direct manager was perceived as being more self-confident ($M = 6.60$), emotionally stable ($M = 6.22$), industrious ($M = 6.13$), a leader ($M = 6.29$), logical ($M = 7.09$), and responsible ($M = 7.16$) than the indirect manager ($M_s = 2.70, 3.16, 3.35, 2.23, 4.47$, and 4.95 , respectively).

EFFECTS ON INFLUENCE OUTCOMES: HYPOTHESIS 4A VERSUS HYPOTHESIS 4B

The MANOVA with the three influence outcomes as dependent variables resulted in the following statistics: Wilks's lambda for the main effect of gender was .95, $F(3, 82) = 1.46, p > .05$; Wilks's lambda for the main effect of influence style was .83, $F(3, 82) = 5.70, p < .05$; and Wilks's lambda for the Gender \times Influence Style interaction was .98, $F(3, 82) = .68, p > .05$.

A perusal of the univariate follow-ups reported in Table 2 shows that only influence use affected ratings on resistance, commitment, and compliance. The presence of the multivariate main effect for influence use, and the lack of a statistically significant multivariate main effect for gender and for the Influence \times Gender interaction, provide support for Hypothesis 4b over Hypothesis 4a.

Requests made by direct managers encountered a consistent pattern of less resistance ($M = 1.95$), less compliance ($M = 4.82$), and more commitment ($M = 6.40$) than did requests made by indirect managers (M s = 3.29, 5.53, and 5.58, respectively).

It should be noted that of the three influence outcomes measured (resistance, compliance, and commitment), only the resistance scale showed a reliability level higher than .70, which is the value considered to be acceptable for newly developed scales (Nunnally & Bernstein, 1994). However, results regarding influence outcomes were consistently affected by the influence use manipulation and consistently support Hypothesis 4b over Hypothesis 4a. Hence, consistent with measurement theory, it is expected that these effects would be even stronger if compliance and commitment were measured with more reliable scales (Nunnally & Bernstein, 1994).

DISCUSSION

This experiment examined the effects of gender and the use of influence on managerial evaluations. We adopted a strong inference epistemological approach and confronted predictions derived from social role versus structural models. We conducted an experiment in which female and male managers held identical organizational/structural positions and used (a) influence behaviors stereotypically associated with men (i.e., direct); and (b) influence behaviors stereotypically associated with women (i.e., indirect). Conse-

quently, we were able to assess the effects of gender-role expectations on the evaluations of female managers, controlling for the potential confounding effects of organizational role expectations. The prediction of the social-role model was that female managers would receive more negative evaluations than male managers when using (sex-role incongruent) direct influence behaviors. The prediction of the structural model was that there would be no gender-based differences (because the female and male managers hold identical positions) and there would be a main effect for influence use (because direct influence is more congruent with the managerial position than indirect influence).

Results overwhelmingly supported predictions made from the structural perspective over those derived from the social-role model. Results of this strong inference experiment indicate that:

1. Female and male managers received equivalent ratings when they utilized the same influence style; there were no differences in evaluations of female and male managers.
2. Female managers were not evaluated more negatively than male managers when they used a direct influence style.
3. Influence style was more salient than gender regarding power bases ratings, perceived leadership effectiveness, managerial attributes ratings, and influence outcomes.
4. Regardless of gender, a manager using a direct influence style was perceived as being more powerful, effective, self-confident, emotionally stable, industrious, a leader, logical, and responsible and as encountering more commitment, less resistance, and more compliance than a manager using an indirect style.

In short, when the organizational role was experimentally held constant, the type of influence used by the manager (i.e., direct or indirect) affected managerial evaluations such that a direct influence style, which is more congruent with a managerial position, was perceived more favorably than an indirect influence style. Given that the managerial organizational role was held constant, the female manager was evaluated in the same manner as the male manager, even when she violated gender-role expectations by using a direct influence style.

IMPLICATIONS FOR MANAGEMENT THEORY

Results can be interpreted in light of a cognitive approach to the study of power and influence in organizations (Aguinis, Nesler, Hosoda, & Tedeschi, 1994; Aguinis, Nesler, Quigley, et al., 1994; Farmer & Aguinis, 1998; Lord &

Maier, 1989). The fact that predictions of the structural model prevailed over those made by the social role model suggest that participants' stereotypic judgments toward female managers were weakened because individuating and organizational role information was provided regarding the managers (Eagly & Steffen, 1984; Eagly & Wood, 1982). More precisely, the informational cues included in the manipulations regarding the organizational position (i.e., managerial role) and the use of influence (e.g., direct style) conveyed what Gioia and Sims (1983) labeled "power messages." Consequently, study participants seem to have used this information to categorize the manager into the prototype of a powerful/effective manager. This categorization seems to have led to the favorable evaluation of direct influence, which, in turn, is perceived as being more appropriate for the managerial role than the use of indirect influence.

Second, these findings parallel predictions of leadership categorization theory (LCT). LCT posits that individuals use cognitive "maps" or prototypes, consisting of specific attributes characteristic of leaders, when distinguishing leaders from nonleaders. According to LCT, managers are more likely to be perceived as leaders when they frequently use behaviors that are consistent with or "prototypical" of individuals' leadership expectations (Cronshaw & Lord, 1987; Lord, Foti, & De Vader, 1984). These results further our understanding regarding the types of behaviors contained within individuals' leadership prototypes. Early studies suggested that individuals perceive leaders as possessing intelligence, dominance, and masculine personality traits (Lord, De Vader, & Alliger, 1986). More recently, Carli, LaFleur, and Loeber (1995) discovered that, regardless of gender, persuasive speakers using a nonverbal dominant style were perceived as more powerful, influential, and competent than speakers using a high task, social, or submissive style. Likewise, this study's results parallel the previous studies' findings and, in addition, indicate that individuals may possess explicit expectations such that effective and powerful managers are expected to use direct and assertive influence behaviors.

Third, numerous investigations have concluded that gender is a very apparent, accessible, and salient category in a person's memory (e.g., Maccoby, 1988). Accordingly, particularly from the perspective of the social-role model, gender is predicted to be very influential in categorizing individuals as effective or ineffective leaders (cf. Lord & Maier, 1989). Nevertheless, this experiment provided preliminary evidence to suggest that when the managerial role and influence use are held constant, potential gender-based expectations may be overridden or neutralized. These results are congruent with findings reported by Ely (1995). Ely collected quantitative and qualita-

tive data in eight law firms and concluded that the concept of gender in organizations is not intrinsically biological. Instead, gender is a social construction that is dependent on the organizational structure of power. Likewise, this study's results indicate that perceptions and evaluations of female and male managers are more strongly determined by their organizational position and use of influence than by their biological gender.

IMPLICATIONS FOR MANAGEMENT PRACTICE

These results provide preliminary evidence suggesting that organizational role information and influence use can override gender-based stereotypes and, in turn, eliminate gender-based biases in managerial evaluations of power, effectiveness, attributes needed for managerial success, and managerial influenceability. Thus, organizations that wish to reduce gender-based biases in, for instance, their performance appraisal systems, may choose to provide raters with thorough information regarding the organizational role in question and provide female managers with the opportunity to use direct influence. These interventions may override potential gender-based biases.

Implications for women in organizations. Given the results of this study, women need to be aware that stereotypic judgments toward their leadership behavior are likely to occur when there is little opportunity for them to present individuating information, such as during telephone calls and brief interactions in the hallway. Although this may be particularly frustrating for those women who already have proven their competence and achieved a high-status position within the organization, being aware and prepared for prejudicial interactions may help women overcome the stress associated with such encounters.

In addition, women need to be prepared to take an active role in displaying their competence and effective use of influence behaviors when they are given the opportunity to present individuating information to others. These situations might include making a presentation at a business meeting or during one-on-one discussions with supervisors, peers, and subordinates. Furthermore, women may not want to wait for these situations to occur by chance. Instead, they should consciously and strategically find or create situations where individuating information can be effectively conveyed to other organizational members.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Despite the fact that these results are encouraging regarding the reduction of gender-based biases in evaluations and the potential organizational advancement of female managers, this experiment has limitations that may limit the results' generalizability. Next, we discuss limitations and suggestions for future research regarding study participants, manipulation of independent variables, use of video methodology, and operationalization of managerial attributes.

Study participants. Our sample consisted of undergraduate students. Participants were drawn from a large urban, nonresidential western U.S. university. The majority had work experience, and almost half had experience in a supervisory role. Thus, the overall sample experience and background warrants generalizability of results beyond undergraduate student populations to populations of young professionals, recent graduates, and other junior organizational members. However, as is the case when student samples are used (e.g., Cropanzano, Aguinis, Schminke, & Denham, in press), we question the generalizability of the findings to older, more experienced organizational members. College students may be more aware of or concerned about social norms and problems inherent in gender discrimination than are employees in their 40s and 50s. Gender effects at these ages are likely to be more pronounced and probably different due to such factors as prior work experience, education, religious background, and the impact of personal and organizational cultures. Accordingly, future research should replicate this study outside classroom environments.

Manipulation of independent variables. We acknowledge three limitations regarding the manipulation of the independent variables. First, researchers generally agree that gender bias is more likely to exist when a woman is in a male-dominated or masculine gender-typed occupation (e.g., Robbins & DeNisi, 1993). The managers in our manipulations were portrayed as customer service managers, which may have been perceived as a feminine-typed specialty because women frequently occupy human resources management positions (U.S. Department of Labor, 1995) and positions in which personal interactions between employees and customers are required (Blum, Fields, & Goodman, 1994). Consequently, a conceptual replication of our study in which female and male managers are portrayed as occupying a male-dominated occupation is certainly warranted. In addition, fu-

ture research could vary both the type of position title (e.g., line vs. staff function) as well as the managerial level (e.g., manager vs. assistant vice president vs. director) of the actor. In such research, level itself could serve as an independent variable in addition to job function (e.g., hard or soft), gender, and influence style.

Second, it may be argued that results of our study may vary as a function of specific organizational and leadership contexts. Specifically, many organizations are increasingly encouraging a shift in leadership styles from more autocratic roles to more participative roles. For instance, Cascio (1995) asserted that the increasingly popular implementation of teams and self-managed teams in organizations is changing the nature of the managerial role from "boss" to team facilitator, team coordinator, and mentor. We believe that results of this study may not generalize to extremely autocratic and extremely participative contexts. However, we also believe that this study makes a meaningful contribution and results can be generalized to the old (i.e., more autocratic) as well as the new (i.e., more participative) leadership context. More specifically, the Method section, Appendix A, and Appendix B show that our experiment did not manipulate degree of participation, but influence use (i.e., direct vs. indirect). Admittedly, the manager using a direct influence style may be perceived as being more autocratic than the manager using an indirect influence style. However, despite the fact that there may be direct influence/autocratic and indirect influence/participative pairings, managers adopting a mentoring and coordinating role also vary regarding the use of more direct or indirect influence tactics. In short, both autocratic and participative leaders can vary regarding the use of influence so that some can be more direct than others. Thus, we speculate that these findings can be generalized to both more autocratic as well as more participative leadership contexts.

Third, it may be argued that study participants may have responded to a general "like/dislike" attribution effect for the managers in the videotapes. Although there is evidence suggesting that effective managers can be more relationship-oriented and participative in the use of influence (Yukl, 1994), we cannot rule out the possibility that participants perceived the indirect managers as being ineffective at using indirect influence tactics, and the direct managers as being effective at using direct influence tactics. Our study included items to measure the effectiveness of the direct/indirect manipulation, but there is no way to disentangle this alternative explanation for the study's findings. Future research should replicate the present study adding the "effectiveness" independent variable. Thus, conditions would consist of gender (male, female), influence style (direct, indirect), and effectiveness (effective, ineffective).

Video methodology. We chose to use video methodology as the mode of presentation for the independent variables. We made this choice based on comparisons of various modes of presentation. This body of research leads to the conclusion that there is a continuum consisting of stimuli presentation, signal-to-noise ratio, and subsequent rating accuracy (Murphy, Herr, Lockhart, & Maguire, 1986). At one end of the continuum, where the signal-to-noise ratio and rating accuracy is the greatest, stimuli presentation is limited; that is, researchers use "lists" of performance dimensions or paper-people vignettes. As the continuum progresses, and stimuli manipulations become more complex, the noise-to-signal ratio increases, and performance rating accuracy decreases. Presentation modes at this end of the continuum include actual observations (i.e., field studies) and videotape scenarios (Kinicki, Hom, Trost, & Wade, 1995; Woehr & Lance, 1991). Because of the experimental nature of our study, it would have been very difficult to conduct a field experiment in which we would have had the ability to precisely control the independent variables. Thus, we chose to use videotapes, which could be considered a second-best choice regarding stimuli presentation, signal-to-noise ratio, and rating accuracy. However, future research could attempt to replicate and generalize these findings using alternative methodologies such as real-time simulations or virtual reality (Pierce & Aguinis, 1997).

Operationalization of managerial attributes. We operationalized perceived managerial attributes using an adjective checklist. These attributes share two characteristics: (a) previous research has demonstrated that they are systematically attributed to effective managers, and (b) they are included in the most popular adjective checklist instruments. Typically, the scales used in adjective checklists consist of only two choices—whether the adjective applies or not (Kaplan & Saccuzzo, 1993). However, in our study, we used 9-point Likert-type scales. Despite this improvement, future research should examine the generalizability of our findings to alternative operationalizations of managerial attributes (i.e., multi-item scales). In addition, future research should expand the measurement of perceived attributes beyond the six assessed in this study.

CLOSING REMARKS

In closing, there are numerous factors that contribute to the "glass ceiling" phenomenon. However, the Glass Ceiling Commission concluded that the chief obstacles blocking women's corporate advancement are prejudice and preconceptions that female executives are less able and effective than their

male counterparts, which, in turn, affect how female managers are viewed and evaluated. This study provides preliminary evidence indicating that some of these preconceptions and prejudices may be overridden when female managers use direct influence behaviors and their organizational position is identical to that of male managers. However, if women have fewer opportunities to utilize influence behaviors critical for perceptions of managerial effectiveness, they may be less capable of conveying to others that they are powerful and influential, which, in turn, may perpetuate the perception among organizational decision makers that the women lack the attributes requisite of top corporate executives. It is our hope that female managers will continue to challenge perceptions and expectations that they are less able and effective than their male counterparts and, in doing so, eventually shatter the glass ceiling.

APPENDIX A

Direct Influence Style Script

Good morning staff. The purpose [reasoning] of this meeting today is to discuss our department's response time to customer complaints. I'm extremely [assertion] disappointed with our response time this month. It is lower than the standards and policies here at the Diamond Corporation.

Remember [persistence] our goal [reasoning] is to answer customer complaints within a 2-day time period. Last month it took us over 3 days to answer customer complaints. This is far from the 2-day mark that we all strive for. This morning I [assertion] will be outlining the specific behaviors that need [telling] to change in order to improve our response time.

Again [persistence] let me say, that it is our goal and policy [reasoning] here to respond to customer complaints within 2 days. We tell our customers that [state importance]. Therefore, it is important for our credibility [state importance] that we meet the 2-day mark.

Equally important is the fact [state importance] that our department bonuses are based on our production level of 2 days. This department has seriously fallen short of this goal and must do [telling] what it takes to bring the response time back to the 2-day mark.

I [assertion] will now outline the behaviors that must change [telling]. I [assertion] have noted a problem with people taking extended breaks. Therefore, you need to watch how much time you spend on your breaks. Make sure that you only take your allotted time of 10 minutes, then promptly return to your desks [telling].

I also want you [telling] to review the company guidelines on how to make a customer call. Too much time is being wasted on single customers because the 5 steps outlined in your training manual are not being followed [state importance]. Be sure to read these [telling] as I'm sure the steps will help you to speed up your response time.

Again, let me remind you [persistence], that it is our goal [reasoning] here to answer customer complaints within a 2-day time frame. This morning I have outlined the behaviors that I expect to change in order for us to reach that goal [assertion].

NOTE: Bracketed language indicates the influence tactic used.

APPENDIX B

Indirect Influence Style Script

Good morning staff. You sure look bright and fresh this morning, like you are ready for another productive day [positive affect]. I brought some donuts this morning for our meeting. I wanted you all to know how much I appreciate the work you do for the Diamond Corporation [verbal manipulation].

The purpose of this meeting today is to discuss our department's response time to customer complaints. My supervisor told me [evasion, using an advocate] that he was really disappointed with our response time this month. It is quite a bit lower than what he would like.

You know, at Diamond Corporation we try [helpless] to answer customer complaints within a 2-day time period. Last month it took us over 3 days to answer customer complaints. This is quite a ways [evasion] from the 2-day mark that we all strive for. And I know how hard all of you work [verbal manipulation].

But . . . try [helpless] to listen to some of the suggestions that I have for improving our response time. . . . You are all such great employees, I know this won't be hard for you [verbal manipulation].

Remember . . . we do tell our customers that we will respond to their complaints within a 2-day time period. It is important. . . . You know [hedge], our department's bonuses are based on our production level of a 2-day response time. I think [disclaimers] our department can do that. Let's all try [helpless] to answer calls a little faster. OK? [hedge].

There may be a few things you could do to improve your response time. It might help if you watch how long you take a break. . . . I mean [disclaimer], you are only supposed to take 10 minutes. Help me with this one [helpless]. Please. Try, try [helpless] to get back to your desks when break time is over.

I overheard some area supervisors [evasion, using an advocate] say that we could improve our response time by using the 5 steps outlined in your training manual. These are the company guidelines on how to make a customer call. I think you will find some great tips on how to speed up your response time. Now . . . I really [intensifier] want to hear you going through these steps. . . . It is recommended and should really [intensifier] help. You are probably close to following the steps anyway, I know how hard all of you work [verbal manipulation].

NOTE: Bracketed language indicates the influence tactic used.

NOTE

1. Before conducting the substantive analyses, we examined whether participant gender had main or interactive effects on the dependent variables. All of the aforementioned analyses were conducted with participant gender as an additional independent variable. Because the examination of participant gender effects was not the main focus of our study, we conducted these analyses using an α level of .01. Each of the three MANOVAs resulted in nonsignificant Wilks's lambda statistics for the main effect of participant gender and two- and three-way interactions including participant gender. We also conducted an ANOVA with leadership effectiveness ratings as the dependent variable. This analysis also resulted in a nonsignificant F statistic. Given these statistically nonsignificant results regarding participant gender, we proceeded to test the substantive hypotheses set forth in the introduction.

REFERENCES

- Aguinis, H., Nesler, M. S., Hosoda, M., & Tedeschi, J. T. (1994). The use of influence tactics in persuasion. *Journal of Social Psychology, 134*, 429-438.
- Aguinis, H., Nesler, M. S., Quigley, B. M., Lee, S., & Tedeschi, J. T. (1996). Power bases of faculty supervisors and educational outcomes for graduate students. *Journal of Higher Education, 67*, 267-297.
- Aguinis, H., Nesler, M. S., Quigley, B. M., & Tedeschi, J. T. (1994). Perceptions of power: A cognitive perspective. *Social Behavior and Personality, 22*, 377-384.
- Aguinis, H., Simonsen, M. M., & Pierce, C. A. (1998). Effects of nonverbal behavior on perceptions of power bases. *Journal of Social Psychology, 138*, 455-469.
- Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology, 42*, 155-162.
- Blum, T. C., Fields, D. L., & Goodman, J. S. (1994). Organization-level determinants of women in management. *Academy of Management Journal, 37*, 241-268.
- Brass, D. J. (1984). Being in the right place: A structural analysis of individual influence in an organization. *Administrative Science Quarterly, 29*, 518-539.
- Brass, D. J., & Burkhardt, M. E. (1993). Potential power and power use: An investigation of structure and behavior. *Academy of Management Journal, 36*, 441-470.
- Brenner, O. C., Tomkiewicz, J., & Schein, V. E. (1989). The relationship between sex role stereotypes and requisite management characteristics revisited. *Academy of Management Journal, 32*, 662-669.
- Carli, L. L. (1989). Gender differences in interaction style and influence. *Journal of Personality and Social Psychology, 56*, 565-576.
- Carli, L. L. (1990). Gender, language and influence. *Journal of Personality and Social Psychology, 59*, 941-951.
- Carli, L. L., LaFleur, S. J., & Loeber, C. C. (1995). Nonverbal behavior, gender, and influence. *Journal of Personality and Social Psychology, 68*, 1030-1041.
- Cascio, W. F. (1995). Whither industrial and organizational psychology in a changing world of work? *American Psychologist, 50*, 928-939.
- Cowan, G., Drinkard, J., & MacGavin, L. (1984). The effects of target, age, and gender on use of power strategies. *Journal of Personality and Social Psychology, 47*, 1391-1398.

- Cronshaw, S. F., & Lord, R. G. (1987). Effects of categorization, attribution, and encoding processes on leadership perceptions. *Journal of Applied Psychology, 72*, 97-106.
- Cropanzano, R., Aguinis, H., Schminke, M., & Denham, D. L. (in press). Disputant reactions to managerial conflict resolution tactics: A comparison among Argentina, the Dominican Republic, Mexico, and the United States. *Group & Organization Management*.
- Dovidio, J. F., Ellyson, S. L., Keating, C. F., Heltman, K., & Brown, C. E. (1988). The relationship of social power to visual displays of dominance between men and women. *Journal of Personality and Social Psychology, 54*, 233-242.
- Dreher, G. F., Dougherty, T. W., & Whitely, W. (1989). Influence tactics and salary attainment: A gender-specific analysis. *Sex Roles, 20*, 535-550.
- DuBrin, A. J. (1991). Sex and gender differences in tactics of influence. *Psychological Reports, 68*, 635-646.
- Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Hillsdale, NJ: Lawrence Erlbaum.
- Eagly, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta-analysis. *Psychological Bulletin, 108*, 233-256.
- Eagly, A. H., Karau, S. J., & Makhijani, M. G. (1995). Gender and the effectiveness of leaders: A meta-analysis. *Psychological Bulletin, 117*, 125-145.
- Eagly, A. H., Makhijani, M. G., & Klonzky, B. G. (1992). Gender and the evaluation of leaders: A meta-analysis. *Psychological Bulletin, 111*, 3-22.
- Eagly, A. H., & Steffen, V. J. (1984). Gender stereotypes stem from the distribution of women and men into social-roles. *Journal of Personality and Social Psychology, 46*, 735-754.
- 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.
- Ely, R. J. (1995). The power of demography: Women's social constructions of gender identity at work. *Academy of Management Journal, 38*, 589-634.
- Fagenson, E. A. (1990). Perceived masculine and feminine attributes examined as a function of individuals' sex and level in the organizational power hierarchy: A test of four theoretical perspectives. *Journal of Applied Psychology, 75*, 204-211.
- Falbo, T. (1982). PAQ types and power strategies used in intimate relationships. *Psychology of Women Quarterly, 6*, 399-405.
- Falbo, T., & Peplau, L. A. (1980). Power strategies in intimate relationships. *Journal of Personality and Social Psychology, 38*, 618-628.
- Farmer, S., & Aguinis, H. (1998). *Social power in supervisor-subordinate relationships*. Manuscript submitted for publication.
- Fiske, S. T., Bersoff, D. N., Borgida, E., Deaux, K., & Heilman, M. E. (1991). Social science research on trial: The use of sex stereotyping research in *Price Waterhouse v. Hopkins*. *American Psychologist, 46*, 1049-1060.
- French, J. R. P., & Raven, B. H. (1959). The bases of social power. In D. Cartwright (Ed.), *Studies in social power* (pp. 150-167). Ann Arbor, MI: Institute for Social Research.
- Geller, P. A., & Hobfoll, S. E. (1993). Gender differences in preference to offer social support to assertive men and women. *Sex Roles, 28*, 419-432.
- Gioia, D. A., & Sims, H. P. (1983). Perceptions of managerial power as a consequence of managerial behavior and reputation. *Journal of Management, 9*, 7-26.
- Gough, H. G., & Heilbrun, A. B. (1965). *Manual for the Adjective Check List and the need scales for the ACL*. Palo Alto, CA: Consulting Psychologists Press.
- Gutck, B. A. (1993). Changing the status of women in management. *Applied Psychology: An International Review, 42*, 301-311.

- Harper, N. L. & Hirokawa, R. Y. (1988). A comparison of persuasive strategies used by female and male managers: An examination of downward influence. *Communication Quarterly*, 36, 157-168.
- 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.
- Hinkin, T. R., & Schriesheim, C. A. (1989). Development and application of new scales to measure the French and Raven (1959) bases of social power. *Journal of Applied Psychology*, 78, 561-567.
- Howard, J. A., Blumstein, P., & Schwartz, P. (1986). Sex, power, and influence tactics in intimate relationships. *Journal of Personality and Social Psychology*, 51, 102-109.
- Ibarra, H. (1993). Personal networks of women and minorities in management: A conceptual framework. *Academy of Management Review*, 18, 56-87.
- Jacobs, J. A. (1992). Women's entrance into management: Trends in earnings, authority and values among salaried managers. *Administrative Science Quarterly*, 37, 282-301.
- Johnson, P. (1976). Women and power: Toward a theory of effectiveness. *Journal of Social Issues*, 32, 99-110.
- Kanter, R. M. (1977). *Men and women of the corporation*. New York: Basic Books.
- Kaplan, R. M., & Saccuzzo, D. P. (1993). *Psychological testing: Principles, applications, and uses* (3rd ed.). Pacific Grove, CA: Brooks/Cole.
- Kinicki, A. J., Hom, P. W., Trost, M. R., & Wade, K. J. (1995). Effects of category prototypes on performance-rating accuracy. *Journal of Applied Psychology*, 80, 354-370.
- Kipnis, D., & Schmidt, S. M. (1988). Upward-influence styles: Relationship with performance evaluations, salary and stress. *Administrative Science Quarterly*, 33, 528-542.
- Kipnis, D., Schmidt, S. M., & Wilkinson, I. (1980). Intraorganizational influence tactics: Explorations in getting one's way. *Journal of Applied Psychology*, 65, 440-452.
- Lakoff, R. T. (1975). *Language and woman's place*. New York: Harper & Row.
- Lord, R. G., De Vader, C. L., & Alliger, G. M. (1986). A meta-analysis of the relation between personality traits and leadership perceptions: An application of validity generalization procedures. *Journal of Applied Psychology*, 71, 402-410.
- Lord, R. G., Foti, R. J., & De Vader, C. L. (1984). A test of leadership categorization theory: Internal structure, information processing, and leadership perceptions. *Organizational Behavior and Human Performance*, 34, 343-378.
- Lord, R. G., & Maher, K. J. (1989). Cognitive processes in industrial and organizational psychology. In C. L. Cooper & I. Robertson (Eds.), *International review of industrial and organizational psychology* (pp. 49-91). London: John Wiley.
- Maccoby, E. E. (1988). Gender as a social category. *Developmental Psychology*, 24, 755-765.
- Mainiero, L. A. (1986). Coping with powerlessness: The relationship of gender and job dependency to empowerment-strategy usage. *Administrative Science Quarterly*, 31, 633-653.
- Morrison, A. M., & Von Glinow, M. A. (1990). Women and minorities in management. *American Psychologist*, 45, 200-208.
- Morrison, A. M., White, R. P., & Van Velsor, E. (1987). *Breaking the glass ceiling: Can women reach the top of America's largest corporations?* Reading, MA: Addison-Wesley.
- Murphy, K. R., Herr, B. M., Lockhart, M. C., & Maguire, E. (1986). Evaluating the performance of paper people. *Journal of Applied Psychology*, 71, 654-661.
- Nesler, M. S., Aguinis, H., Quigley, B. M., Lee, S., & Tedeschi, J. T. (in press). The development and validation of a scale measuring global social power based on French and Raven's (1959) power taxonomy. *Journal of Applied Social Psychology*.

- Nesler, M. S., Aguinis, H., Quigley, B. M., & Tedeschi, J. T. (1993). The effect of credibility on perceived power. *Journal of Applied Social Psychology*, 23, 1407-1425.
- Nieva, V. F., & Gutek, B. A. (1981). *Women and work: A psychological perspective*. New York: Praeger.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Offerman, L. R., & Kearney, C. T. (1988). Supervisor sex and subordinate influence strategies. *Personality and Social Psychology Bulletin*, 14, 360-367.
- Offerman, L. R., & Schrier, P. E. (1985). Social influence strategies: The impact of sex, role, and attitudes toward power. *Personality and Social Psychology Bulletin*, 11, 286-300.
- Ohlott, P. J., Ruderman, M. N., & McCauley, C. D. (1994). Gender differences in managers' developmental job experiences. *Academy of Management Journal*, 37, 46-67.
- Pfeffer, J. (1981). *Power in organizations*. Boston: Pitman.
- Pierce, C. A., & Aguinis, H. (1997). Using virtual reality technology in organizational behavior research. *Journal of Organizational Behavior*, 18, 407-410.
- Platt, J. R. (1964). Strong inference. *Science*, 146(3642), 347-353.
- Powell, G. N. (1993). *Women and men in management*. Newbury Park, CA: Sage.
- Powell, G. N., & Butterfield, D. A. (1989). The "good manager": Did androgyny fare better in the 1980's? *Group & Organization Studies*, 14, 216-233.
- Ragins, B. R. (1989). Power and gender congruency effects in evaluations of male and female managers. *Journal of Management*, 15, 65-76.
- Ragins, B. R., & Sundstrom, E. (1989). Gender and power in organizations: A longitudinal perspective. *Psychological Bulletin*, 105, 51-88.
- Riger, S., & Galligan, P. (1980). Women in management: An exploration of competing paradigms. *American Psychologist*, 35, 902-910.
- Robbins, T. L., & DeNisi, A. S. (1993). Moderators of sex bias in the performance appraisal process: A cognitive analysis. *Journal of Management*, 19, 113-126.
- Sagrestano, L. M. (1992). Power strategies in interpersonal relationships: The effects of expertise and gender. *Psychology of Women Quarterly*, 16, 481-495.
- Schein, V. E. (1973). The relationship between sex role stereotypes and requisite management characteristics. *Journal of Applied Psychology*, 57, 95-100.
- Schein, V. E. (1975). Relationships between sex role stereotypes and requisite management characteristics among female managers. *Journal of Applied Psychology*, 60, 340-344.
- Schein, V. E., Mueller, R., & Jacobson, C. (1989). The relationship between sex role stereotypes and requisite management characteristics among college students. *Sex Roles*, 20, 103-110.
- Schlueter, D. W., & Barge, J. K. (1993). Assessing the impact of gender-role socialization on issues of power and influence in the workplace. In C. Berryman-Fink, D. Ballard-Reisch, & L. Newman (Eds.), *Communication and sex-role socialization* (pp. 105-138). New York: Garland.
- Schlueter, D. W., Barge, J. K., & Blankenship, D. (1990). A comparative analysis of influence strategies used by upper and lower level male and female managers. *Western Journal of Speech Communication*, 54, 42-65.
- Spence, J. T., & Helmreich, R. L. (1978). *Masculinity and femininity: Their psychological dimensions, correlates and antecedents*. Austin: University of Texas Press.
- Steil, J. M., & Weltman, K. (1992). Influence strategies at home and at work: A study of sixty dual career couples. *Journal of Social and Personal Relationships*, 9, 65-88.
- Tharenou, P., Latimer, S., & Conroy, D. (1994). How do you make it to the top? An examination of influences on women's and men's managerial advancement. *Academy of Management Journal*, 37, 899-931.

- Triandis, H. C., Kurowski, L. L., & Gelfand, M. J. (1994). Workplace diversity. In H. C. Triandis, M. D. Dunnette, & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 4, pp. 769-827). Palo Alto, CA: Consulting Psychologists Press.
- U.S. Bureau of the Census. (1994). *Statistical abstract of the United States: 1994* (114th ed.). Washington, DC: Government Printing Office.
- U.S. Department of Labor. (1991). *A report on the glass ceiling initiative*. Washington, DC: Government Printing Office.
- U.S. Department of Labor. (1995). *Good for business: Making full use of the nation's human capital*. Washington, DC: Government Printing Office.
- Woehr, D. J., & Lance, C. E. (1991). Paper people versus direct observation: An empirical examination of laboratory methodologies. *Journal of Organizational Behavior*, 12, 387-397.
- Yukl, G. (1994). *Leadership in organizations* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.
- Yukl, G., Falbe, C. M., & Youn, J. Y. (1993). Patterns of influence behavior for managers. *Group & Organization Management*, 18, 5-28.
- Yukl, G., & Tracey, J. B. (1992). Consequences of influence tactics used with subordinates, peers, and the boss. *Journal of Applied Psychology*, 77, 525-535.

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