

Effects of Nonverbal Behavior on Perceptions of a Female Employee's Power Bases

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ABSTRACT. The authors extended a previous examination of the effects of nonverbal behavior on perceptions of a male employee's power bases (H. Aguinis, M. M. Simonsen, & C. A. Pierce, 1998) by examining the effects of nonverbal behavior on perceptions of a female employee's power bases. U.S. undergraduates read vignettes describing a female employee engaging in 3 types of nonverbal behavior (i.e., eye contact, facial expression, body posture) and rated their perceptions of the woman's power bases (i.e., reward, coercive, legitimate, referent, expert, credibility). As predicted, (a) direct eye contact increased perceptions of coercive power, and (b) a relaxed facial expression decreased perceptions of all 6 power bases. Also as predicted, the present results differed markedly from those of Aguinis et al. (1998) regarding a male employee. The authors discuss implications for theory, future research, and the advancement of female employees.

Key words: female employee, male employee, nonverbal behavior, perceptions of power bases, U.S. undergraduates

THE EFFECTIVE USE OF POWER and the perceptions of one's power by subordinates, peers, and superiors are critical determinants of managerial and organizational success (Aguinis, Nesler, Hosoda, & Tedeschi, 1994; Aguinis, Nesler, Quigley, Lee, & Tedeschi, 1996; Pfeffer, 1981). Specifically, an employee's perceived effectiveness and organizational advancement depend on the development, acquisition, and use of power in the work place (e.g., Vecchio & Sussmann, 1989). Thus, determining the antecedents of perceptions of high or low power is of both theoretical and practical interest. One important antecedent of power perceptions is nonverbal behavior (Ellyson & Dovidio, 1985a).

Nonverbal behaviors such as eye contact, facial expression, and body posture are important forms of communication. Nonverbal behavior is relevant to

several interpersonal processes such as deception, impression formation, attraction, social influence, and emotional expression (Patterson, 1983). Furthermore, nonverbal behavior provides information, expresses intimacy, exercises social control, and facilitates task goals (Harrison, 1973; Patterson). Thus, nonverbal behavior in social and organizational settings may have important consequences for individuals in those settings.

There has been increased interest in investigating nonverbal behavior as a means of establishing and communicating power (Ellyson & Dovidio, 1985a). Unfortunately, researchers have not examined the relationship between specific forms of nonverbal behavior and perceptions of specific power bases, have not clearly defined the power construct, and have not systematically measured power (see Aguinis, Simonsen, & Pierce, 1998, for a more detailed discussion of those issues).

Aguinis et al. (1998) addressed some of the aforementioned limitations in the literature linking nonverbal behavior and power perceptions. They examined the effects of three specific types of nonverbal behavior—eye contact, facial expression, and body posture—on perceptions of power. Overcoming limitations of previous investigations, Aguinis et al. (1998) used a consensual definition of power in social and applied psychology, clearly defined the various components of power, and used psychometrically sound scales to measure power.

Aguinis et al. (1998) defined power as the potential of an agent to alter a target's behavior, intentions, attitudes, beliefs, emotions, or values (French & Raven, 1959). They used French and Raven's taxonomy of power, which includes the following types of power: reward, coercive, legitimate, referent, and expert. *Reward power* is based on the target's perceptions that the agent has the ability to provide him or her with desired tangible or intangible outcomes. *Coercive power* is based on the target's belief that the agent has the ability to punish him or her. *Legitimate power* is based on the target's perception that the agent has the legitimate right to give orders with which the target is obligated to comply. *Referent power* is based on the target's identification, or desire to be associated, with the agent. *Expert power* is based on the target's perception that the agent possesses special knowledge.

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Readers can obtain copies of the vignettes used in the research from the first author.

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In addition, Aguinis et al. (1998) incorporated credibility as a sixth power base. *Credibility* is the objectively determined truthfulness, follow-through, and accuracy of a source (Tedeschi & Lindskold, 1976). Researchers often include credibility as a power base because it is an antecedent to an agent's ability to influence a target (Nesler, Aguinis, Quigley, Lee, & Tedeschi, 1999). For instance, compliance on an assigned task was found to be significantly greater when a highly credible communicator assigned the task than when a less credible communicator assigned it (Heilman, 1974). In general, people perceive managers with high credibility as more powerful than managers with low credibility (e.g., Nesler, Aguinis, Quigley, & Tedeschi, 1993).

In sum, Aguinis et al. (1998) experimentally manipulated eye contact (direct vs. indirect), facial expression (relaxed vs. nervous), and body posture (sitting back in a chair with legs crossed vs. sitting on the edge of a chair); they then assessed whether those three forms of nonverbal behavior affected perceptions of the aforementioned six power bases. They chose those types of nonverbal behavior because of the considerable attention they had received in communication research (e.g., Fehr & Exline, 1987; Harper, 1985) and because of their potential to influence perceptions of power (e.g., Goffman, 1961; Henley & LaFrance, 1984; Thayer, 1969). Moreover, those behaviors correspond to three of the five major categories typically used to classify nonverbal behavior (i.e., facial expressions, eye and visual behavior, kinesics, paralanguage, proxemics; Ellyson & Dovidio, 1985b).

In the study of Aguinis et al. (1998), the participants read vignettes describing the interaction of two male employees. In the vignettes, the researchers manipulated the nonverbal behavior of one employee and asked the participants to rate his power bases. Direct eye contact increased perceptions of credibility, a relaxed facial expression increased perceptions of power for all of the power bases except coercive power, and body posture had no effect on power perceptions.

As described earlier, Aguinis et al. (1998) overcame several limitations in previous work linking nonverbal behavior and power perceptions. However, a limitation of their study was that participants rated the power of a male employee only; the vignettes did not include a female employee.

In the present study, we extended the study of Aguinis et al. (1998) by assessing the effects of nonverbal behavior on perceptions of a female employee's power. Investigators of gender and gender-related roles in organizations have demonstrated that men and women are expected to behave in a manner congruent with broader gender-based stereotypes (e.g., Carli, 1989, 1990) or gender roles (Eagly & Johnson, 1990). Men are expected to use more direct and assertive behavior than women (Johnson, 1976). For example, DuBrin (1991) found that men were expected to use assertion, jokes, or threats (i.e., direct tactics) in influencing others to complete a work objective, whereas women were expected to use appearance, charm, and compliments (i.e., indirect tactics).

Not only are men and women expected to behave in certain gender-specific

ic ways, there may be a tendency for men and women to actually use stereotypical behaviors in both interpersonal (Falbo & Peplau, 1980; Maccoby, 1988) and work environments (Eagly & Johnson, 1990; Mainiero, 1986). For instance, men tend to use coercion (Offerman & Kearny, 1988; Offerman & Schrier, 1985) and punishment (Harper & Hirokawa, 1988). Alternatively, women tend to use negotiation (Offerman & Kearney; Offerman & Schrier), altruism (Harper & Hirokawa), acquiescence (Mainiero), and smiles (Steil & Weltman, 1992).

The social role model explains differences regarding how men and women behave in organizational contexts and how others interpret their behaviors (Aguinis & Adams, 1998; Eagly, 1987; Schlueter & Barge, 1993). This model posits that gender-based differences in behaviors, as well as perceptions of the appropriateness of those behaviors, result from culturally defined gender role expectations that carry over to organizational settings (Nieva & Gutek, 1981). Thus, on the basis of culturally defined gender roles, men and women are expected to behave in certain ways; when they violate these expectations, others may evaluate them negatively.

In sum, our purpose in the present experiment was to extend the findings of Aguinis et al. (1998) by examining the effects of nonverbal behavior on perceptions of a female employee's power. Overall, the social role model posits that perceptions of power result from gender role expectations. People may evaluate women more negatively (i.e., as having more negative power bases) when they engage in gender-incongruent (i.e., assertive or direct) behavior than when they engage in gender-congruent (i.e., passive or indirect) behavior (Aguinis & Adams, 1998). Thus, we tested the following hypothesis:

Hypothesis 1: People perceive a female employee's power bases as more negative when she engages in the gender-incongruent (i.e., assertive) nonverbal behavior of direct eye contact than when she displays the gender-congruent (i.e., unassertive) nonverbal behavior of indirect eye contact.

In addition, the social role model posits that, in general, stereotypical beliefs about women are incongruent with the managerial role (e.g., Schein, Mueller, & Jacobson, 1989). Stated differently, people view the behaviors and attitudes stereotypically assigned to women (e.g., agreeableness) as detrimental to the managerial role (e.g., assertiveness). Thus, several researchers have concluded that women are in a lose-lose situation: If they behave in a manner congruent with managerial role expectations, they transgress social role expectations, and others penalize them for being "too aggressive" (Aguinis & Adams, 1998; Schein et al.). Alternatively, if they behave in a manner congruent with social role expectations, others may accept them socially but may not perceive them as effective managers. For instance, others may perceive them as lacking power, an important prerequisite for managerial success (Aguinis & Adams). In other words, a female employee with a relaxed facial expression, as compared with a nervous

facial expression, is closer to the social role expectation of agreeableness than to the managerial role expectation of assertiveness. Thus, we tested the following hypothesis:

Hypothesis 2: People rate a female employee as less powerful when she displays a relaxed facial expression than when she displays a nervous facial expression.

Finally, we did not have a specific directional hypothesis regarding body posture. Thus, we posited the following research question:

Research Question 1: Do people rate a female employee as more powerful when she sits back in her chair with her legs crossed than when she sits on the edge of her seat?

Method

Participants

The participants were 174 U.S. undergraduate students who received course credit for participating. To make the present results comparable to those of Aguinis et al. (1998), we drew our sample 2 years later from the same undergraduate psychology courses as in the earlier study.

Because of a data coding error, we lost demographic information for approximately 91 participants. Of those for whom demographic information was available, 41 were men, and 42 were women (mean age = 23.58 years, $SD = 5.98$; range = 17–46). Ethnicity for the 83 participants for whom this information was available is the following: 62.9% Anglo-American, 8.63% Latino American, 8.39% Asian American, and 4.19% African American. Forty-seven percent had work experience and, on average, had been working 6 years. Furthermore, 21% had supervisory experience of 1.79 years on average. As expected, these demographic data were nearly identical to those of Aguinis et al. (1998).

Procedure, Design, and Materials

Independent variables. We manipulated nonverbal behavior by using the same vignettes as Aguinis et al. (1998), with the exception that the present participants rated a female rather than a male employee. After random assignment to one of eight experimental conditions, each participant read a description of an interaction between two employees—a woman, “Mary,” and a man, “John.” They responded to various questions about the scenario.

In the vignettes, the employees are seated in chairs in the office of a bank (“Denver Mile High Bank”). They are discussing the bank’s recent decrease in profits resulting from the decrease in loans, mortgages, and number of products

sold to customers (e.g., ATM cards, Visa debit cards). We gave no other information about Mary or John.

In each of the eight vignettes, Mary was described as displaying a combination of three types of nonverbal behavior (i.e., eye contact, facial expression, body posture). The design was a $2 \times 2 \times 2$ full factorial combining (a) looking directly at John versus looking around the room with an occasional glance at John, (b) displaying a relaxed versus nervous facial expression, and (c) sitting back with her legs crossed versus sitting on the edge of her seat.

Dependent variables. After randomly assigning the participants to one of the eight conditions, we asked them to evaluate Mary's power by responding to a questionnaire. We measured the five French and Raven (1959) bases of power (i.e., reward, coercive, legitimate, referent, expert) by using Hinkin and Schriesheim's (1989) power scales. In addition, we measured credibility by using five items from Nesler et al. (1993). All responses were originally on 9-point Likert-type scales with lower scores indicating greater endorsement (1 = *agree*, 9 = *disagree*). We recoded responses so that higher ratings represented greater item endorsement (i.e., 1 = *disagree*, 9 = *agree*). Similar to Aguinis et al. (1998) and other researchers using the aforementioned scales (e.g., Aguinis, Nesler, Quigley, & Tedeschi, 1994), we found that the six power scales had adequate reliability estimates ranging from .83 to .86. (for items and internal consistency reliability estimates, see Table 1).

Results

Following Aguinis et al. (1998), we conducted multiple analyses of variance (ANOVAs) to evaluate the effects of eye contact (direct vs. indirect), facial expression (relaxed vs. nervous), and body posture (sitting back in chair vs. sitting on edge of seat) on the participants' perceptions of a female employee's power bases. For each ANOVA, the independent variables were the main and interactive (second- and third-order) effects of the three forms of nonverbal behavior; each of the six power bases was the dependent variable. We used multiple ANOVAs instead of a multivariate analysis of variance (MANOVA) to make our results comparable to those of Aguinis et al. (1998), who also used multiple ANOVAs. In addition, not all dependent variables were highly correlated, and high correlation is one of the criteria recommended for conducting a MANOVA (Huberty & Morris, 1989). For example, the bivariate correlation between credibility and coercive power was only .18. Several other correlations were in the .40s, and there was only one correlation higher than .70 (i.e., between referent and expert power). Thus, given (a) the need to implement analyses similar to those of Aguinis et al. (1998) to directly compare the results and (b) the lack of high correlations of the dependent variables, we used multiple ANOVAs. Our decision is consistent with Huberty and Morris's conclusion that "to require

TABLE 1
Scale Items and Cronbach's Alpha (α) Reliability Estimates

Item	α
Reward power	.85
Mary can increase John's pay level.	
Mary can influence John's getting a pay raise.	
Mary can provide John with special benefits.	
Mary can influence John's getting a promotion.	
Coercive power	.83
Mary can give John undesirable job assignments.	
Mary can make John's work difficult for him.	
Mary can make things unpleasant on the job for John.	
Mary can make being at work difficult for John.	
Legitimate power	.84
Mary can make John feel that he has a commitment to meet.	
Mary can make John feel that he should satisfy his job requirements.	
Mary can give John the feeling that he has responsibilities to fulfill.	
Mary can make John recognize that he has tasks to accomplish.	
Expert power	.84
Mary can give John good technical suggestions.	
Mary can share with John her considerable experience and training.	
Mary can provide John with sound job-related advice.	
Mary can provide John with the needed technical knowledge.	
Referent power	.86
Mary can make John feel valued.	
Mary can make John feel that she approves of him.	
Mary can make John feel personally accepted.	
Mary can make John feel important.	
Credibility power	.85
Mary is a woman who keeps her word.	
Mary does what she says she will do.	
Mary follows up on what she says.	
Mary matches words with deeds.	
Mary tells the truth.	

Note. $N = 171-174$. We grouped the items for presentation purposes. They appeared in random order in the questionnaire.

MANOVA as a prerequisite of multiple ANOVAs is illogical, and the comfort of statistical protection is an illusion" (p. 307).

The ANOVAs indicated no significant interactions between the three types of nonverbal behavior; thus, we report only main effects in the results. Analyses of differences between the men's and the women's ratings were not possible because gender information was available for 83 of the 174 participants.

Regarding Hypothesis 1, results of the ANOVAs indicated that eye contact had a main effect only on perceptions of coercive power, $F(1, 165) = 4.62, p =$

.033, $\eta^2 = .03$. Ratings of coercive power were higher for direct ($M = 5.08$, $SD = 2.14$) than for indirect ($M = 4.44$, $SD = 1.58$) eye contact.

Regarding Hypothesis 2, there were main effects for facial expression for all power bases. Facial expression affected perceptions of reward power, $F(1, 165) = 8.83$, $p = .003$, $\eta^2 = .05$; coercive power, $F(1, 165) = 6.85$, $p = .01$, $\eta^2 = .04$; legitimate power, $F(1, 165) = 11.53$, $p = .001$, $\eta^2 = .07$; referent power, $F(1, 166) = 28.51$, $p < .001$, $\eta^2 = .15$; expert power, $F(1, 164) = 7.07$, $p = .009$, $\eta^2 = .04$; and credibility, $F(1, 164) = 7.43$, $p = .007$, $\eta^2 = .04$. When we described Mary's facial expression as relaxed, the participants perceived her as having less reward power ($M = 4.88$, $SD = 2.06$), coercive power ($M = 4.37$, $SD = 1.41$), legitimate power ($M = 3.88$, $SD = 1.41$), referent power ($M = 3.34$, $SD = 1.37$), expert power ($M = 4.11$, $SD = 2.12$), and credibility ($M = 4.42$, $SD = 1.19$) than when we described her facial expression as nervous ($M = 5.77$, $SD = 1.75$; $M = 5.15$, $SD = 2.07$; $M = 4.75$, $SD = 1.77$; $M = 4.72$, $SD = 1.79$; $M = 4.88$, $SD = 1.66$; and $M = 5.03$, $SD = 1.60$ for the foregoing six power bases, respectively).

Regarding Research Question 1, results showed a main effect for body posture, but only for the referent power base, $F(1, 166) = 4.80$, $p = .030$, $\eta^2 = .03$. When we described Mary as sitting back in her chair with her legs crossed, the participants perceived her as having more referent power ($M = 4.31$, $SD = 1.60$) than when we described her as sitting on the edge of her chair ($M = 3.75$, $SD = 1.86$).

Discussion

The effective use of power and the perceptions of power by subordinates, peers, and superiors are critical determinants of managerial success and organizational advancement (Aguinis & Adams, 1998). An important variable in establishing and communicating power is nonverbal behavior (Ellyson & Dovidio, 1985a). According to the social role model, the effects of nonverbal behavior on perceptions of a person's power depend on whether that person meets or violates gender role expectations. Thus, we hypothesized that the participants would evaluate a female employee displaying direct eye contact, as opposed to indirect eye contact, as having more negative power bases. We also hypothesized that a relaxed facial expression, as opposed to a nervous facial expression, would lead to perceptions of lower power. In addition, we explored whether sitting in her chair with her legs crossed, as opposed to on the edge of her chair, would lead to perceptions of higher power.

Results provided support for the two hypotheses. First, direct eye contact (i.e., congruent with the managerial role stereotype), as compared with indirect eye contact (i.e., incongruent with the managerial role stereotype), led to higher ratings for a negative source of power. More precisely, direct eye contact increased the participants' perceptions of coercive power. Coercive power is a negative source of power (Aguinis et al., 1996)—that is, coercive power often leads to resistance (Aguinis et al., 1996), lower organizational commitment, and

dissatisfaction (Hinkin & Schriesheim, 1989). Thus, when the female employee used an assertive nonverbal behavior (i.e., direct eye contact), the participants evaluated her as possessing a negative power source. Second, as predicted, a female employee's relaxed facial expression decreased the participants' perceptions of all six power bases. The relaxed facial expression (i.e., congruent with the female gender role stereotype of agreeableness) led to perceptions of lower power than did the nervous facial expression. Finally, regarding Research Question 1, the female employee's sitting back in a chair with legs crossed increased the participants' perceptions of her referent power. This finding is surprising given (a) that this specific nonverbal behavior is associated with individuals of high status (Goffman, 1961) and (b) that women, compared with men, are perceived as having lower organizational status. However, as noted earlier, the research question was a nondirectional exploratory issue. Moreover, body posture affected only one of the six power bases, and the F value barely reached the .05 significance level (i.e., $p = .03$). Consequently, we did not consider this a finding of strong theoretical significance.

Implications for Theory and Research

The participants rated the female employee as having a negative source of power when she engaged in a nonverbal behavior incongruent with gender role expectations (i.e., direct eye contact). In addition, they evaluated her as having less power when she engaged in a nonverbal behavior congruent with her social role but incongruent with the managerial role (i.e., relaxed facial expression). Alternatively, the results of the study involving a male employee (Aguinis et al., 1998) indicated that direct eye contact led to higher credibility ratings than did indirect eye contact. In addition, Aguinis et al. (1998) found that a relaxed facial expression, as compared with a nervous facial expression, enhanced perceptions of reward power, legitimate power, expert power, referent power, and credibility power but not of coercive power. Thus, in comparison, we found in the present study quite the opposite impact of nonverbal behavior on power perceptions—that is, the female employee's direct eye contact did not increase the participants' perceptions of her credibility but, rather, led to perceptions of her coerciveness. Also, the relaxed facial expression, as compared with the nervous facial expression, decreased, rather than increased, the participants' perceptions of the power of the female employee.

The present results, combined with those of Aguinis et al. (1998), demonstrated important gender differences in the effects of nonverbal behavior on perceptions of power. The ability of nonverbal behavior to establish and communicate power depended on gender; the participants in the two studies had different perceptions of a man and a woman engaging in the same types of nonverbal behavior. The present findings extend predictions of the social role model to the relationship between nonverbal behavior and power perceptions. More specifi-

cally, we found empirical support for the prediction that participants would perceive a female employee using gender-incongruent nonverbal behavior (e.g., direct eye contact), compared with gender-congruent nonverbal behavior (e.g., indirect eye contact), as having a more negative power base. In contrast, when the female employee displayed gender-congruent nonverbal behavior (e.g., relaxed facial expression), the participants rated her as lacking power, a critical variable for managerial success.

Implications for the Advancement of Female Employees

Researchers have attributed women's inability to secure top level management positions to the existence of invisible artificial barriers, commonly referred to as the "glass ceiling" (Morrison, White, & Van Velsor, 1987). Numerous variables contribute to the glass ceiling phenomenon. However, the Glass Ceiling Commission concluded that the chief obstacles to women's corporate advancement are prejudice and preconceptions that women are less able and effective than their male counterparts; such obstacles, in turn, affect how supervisors view and evaluate female employees (U.S. Department of Labor, 1995). In the present study, we provided evidence that the display of nonverbal behavior also may contribute to those preconceptions and prejudices. Women need to be aware that they are perceived and evaluated differently from their male counterparts, even when they engage in "trivial" nonverbal behavior. In addition, women must realize that they face a trade off between their gender role and their organizational role expectations. If women choose to fulfill their organizational role expectations, they may violate gender role expectations and be perceived negatively. Alternatively, if they adhere to gender role expectations, they may not be perceived as effective employees (Eagly, Makhijani, & Klonsky, 1992).

Limitations and Future Research

A limitation of the present study, similar to that of Aguinis et al. (1998), was the use of vignettes to manipulate three forms of nonverbal behavior. Vignettes may not reflect the dynamism of nonverbal behavior as well as videotapes or live enactments do. However, vignettes allow researchers to remove potential confounds and extraneous sources of variance that other methods may introduce. Thus, through vignettes, researchers can manipulate nonverbal behavior with precision and a high degree of experimental control. In addition, previous researchers have successfully manipulated general nonverbal behavior and specific body postures through vignettes (e.g., Kudoh & Matsumoto, 1985; Matsumoto & Kudoh, 1987). Regardless, future researchers should investigate the effects of nonverbal behavior on power perceptions of male and female employees by using such methods as videotapes or observations in natural settings.

In conclusion, the participants in the present study perceived and evaluated

women more negatively and considered them less powerful than the participants in the earlier study (Aguinis et al., 1998) rated men engaging in the same nonverbal behaviors. Our findings may explain, at least in part, why the glass ceiling persists. Gender role expectations (a) may encourage women to use nonverbal behavior congruent with those expectations but unrelated to perceptions of effective job performance (i.e., indirect eye contact) and (b) may discourage their use of nonverbal behavior incongruent with gender role expectations but congruent with effective job performance (i.e., direct eye contact). Thus, women attempting to break through the glass ceiling by engaging in behaviors that are congruent with organizational expectations have a challenging journey ahead of them. As our results indicate, engaging in nonverbal behavior congruent with gender role resulted in the female employee's being perceived negatively and as having less power, perceptions that may severely hinder organizational advancement and success.

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