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Running head: *Power and Nonverbal Confidence*

The Downside of Looking Like a Leader: Power, Nonverbal Confidence, and Participative Decision-Making

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Abstract

An abundance of evidence suggests that exhibiting a confident nonverbal demeanor helps individuals ascend social hierarchies. The current research examines some of the implications of having individuals in positions of power who exhibit such nonverbal confidence. Three studies examined dyads that worked together on decision-making tasks. It was found that people participated less in a discussion when they interacted with a powerful individual who exhibited confidence than when a powerful individual did not exhibit confidence. Moreover, people who interacted with a confident powerful individual participated less because they viewed that individual to be more competent. People even deferred to the confident powerful individual's opinions when that individual was wrong, leading to suboptimal joint decisions. Moderation analyses suggest the powerful individual was able to mitigate the effects of a confident demeanor somewhat by also showing an open nonverbal demeanor.

Keywords: power; status; confidence; overconfidence; nonverbal behavior; leadership

Individuals who exhibit a confident nonverbal demeanor are more likely to attain positions of status and power than others. For example, individuals who convey a more confident posture, eye-gaze pattern, and vocal tone receive more deference, are given more control over joint decisions, and emerge as leaders more often than those who convey less confidence (Carli, LaFleur, & Loeber, 1995; Driskell, Olmstead, & Salas, 1993). Strikingly, this pattern emerges even when an individual's confident demeanor is unwarranted – that is, when the individual is actually no more competent than others and when his or her ideas are incorrect (Anderson, Brion, Moore, & Kennedy, 2012).

What are the implications of having confident, and even overconfident, individuals in positions of power and authority? While there might be some advantages to highly confident individuals occupying elevated social positions, we propose that there can also be downsides. Specifically, we hypothesize that in collaborative endeavors, powerful individuals who exhibit a highly confident nonverbal demeanor cause others to participate less, or to suppress their own ideas and opinions. We further hypothesize that others will defer to a confident powerful individual even when that individual's confidence is unjustified – in other words, when that individual's judgment is wrong – thus harming collective performance.

We examined these ideas in three laboratory studies in which participants completed dyadic decision-making tasks while being videotaped. We focused on powerful individuals' nonverbal display of confidence because prior research suggests that the interpersonal effects of confidence emerge through nonverbal behavior (e.g., Kennedy, Anderson, & Moore, 2013). In Study 1, participants were

randomly assigned to high- or low-power roles in a dyadic task. Nonverbal confidence was assessed naturalistically. In Study 2, to help establish the causal effects of confidence, a trained confederate occupying the high-power role conveyed a high or low level of confidence. Study 2 also examined mediating mechanisms and performance outcomes. Study 3 examined a potential moderating condition: the nonverbal display of openness to others' input.

Confident Nonverbal Demeanor and Hierarchy Ascendance

Why does confidence help people attain positions of power and status? People interpret confident nonverbal behavior as a sign of competence and ability. Individuals' actual competence resides within them and is hidden from others, and thus others are often forced to judge individuals' abilities based on superficial cues such as nonverbal behavior, appearance, or speaking style. For example, individuals are seen as competent when they exhibit an erect posture (Ridgeway, 1987), give direct eye contact (Driskell et al., 1993), and speak in a loud and confident tone (Anderson, Brion, Moore, & Kennedy, 2012). In turn, once individuals are perceived as competent, they are accorded more influence and are more likely to be placed in positions of power (e.g., Bass, 2008; Lord, De Vader, & Alliger, 1986). In fact, recent research suggests individuals with a confident nonverbal demeanor can attain positions of status and power even when their confidence is unwarranted. For example, Anderson, Brion, Moore, and Kennedy (2012) found that individuals who exhibited more confidence nonverbally were perceived by teammates as more competent and achieved more influence, even when they were actually no more competent than others (also see Anderson & Kilduff, 2009; Kennedy et al., 2013).

Powerful Individuals' Confident Nonverbal Demeanor and Others' Participation

There are many important implications of the idea that individuals who display a confident nonverbal demeanor disproportionately occupy positions of power, regardless of whether their confidence is justified. Here we focus on one set of implications regarding participative decision-making: we propose that when powerful individuals convey a confident nonverbal demeanor, others will participate less.

As stated earlier, people defer more to others who appear to possess superior capabilities. People who feel less competent than others inhibit their own contributions and afford others greater influence (Anderson, Willer, Kilduff, & Brown, 2012). Therefore, by displaying a confident nonverbal demeanor, powerful individuals are likely to appear more competent, but their perceived competence is also likely to lead others to contribute less.

It is also possible that powerful individuals' confident demeanor might stifle others' participation because it makes the powerholder appear threatening. The organizational literature on voice has shown that fear of negative consequences is a key reason followers fail to raise important issues to their leaders (Kish-Gephart, Detert, Trevino, & Edmondson, 2009; Ryan & Oestreich, 1991). By definition, powerful individuals control resources that others value and have the ability to punish others (Magee & Galinsky, 2008). Subordinates sometimes fear that if they speak up, the powerful individual will withhold valued resources or punish them in some way.

However, confident nonverbal behaviors do not necessarily convey threat. Nonverbal confidence cues such as upright posture or direct eye contact have been called “task cues,” and have been distinguished from “dominance cues” (e.g. forward looming posture, staring; Ridgeway, 1987; Ridgeway, Berger, & Smith, 1985). The former convey a high level of ability while the latter convey a desire to control others through threat. Therefore, we examined whether perceived threat mediated the effects of powerful individuals’ confident demeanor as an open question.

Relevant to this distinction, prior research has found that individuals in powerful positions who use an autocratic or dominating style can stifle others’ participation (for a review, see Bass, 2008). For example, a recent study found that more dominating leaders dampen team communication (Tost, Gino, & Larrick, 2013). However, that work focuses on leaders who are threatening and intimidating, whereas we are focused on nonverbal confidence. Those two variables are distinct. While confidence is socially valued and even encouraged in aspiring leaders (Fritz, Brown, Lunde, & Banset, 2005; Howell & Costley, 2006), dominance and intimidation are not. The current research examines whether something as lauded as confidence can stifle others’ participation just like dominance and intimidation.

Contributions

The current research makes a number of important contributions. First, in the literature on social hierarchy, functionalist accounts have proposed that hierarchies help groups succeed by coordinating members’ behavior and incentivizing self-sacrifice for the collective good (Van Vugt, 2006). However, hierarchies often harm group performance rather than help it (Anderson & Brown,

2008; Halevy, Chou, and Galinsky, 2011). The current research examines one possible reason why: by systematically promoting highly confident and overconfident individuals into positions of power, groups might in some cases hamper their collective performance. Second, we extend emerging research on the interpersonal consequences of confidence and overconfidence (e.g., Anderson, Brion, Moore, & Kennedy, 2012; Radzevick & Moore, 2011; von Hippel & Trivers, 2011). While prior work has emphasized the interpersonal benefits of overconfidence for the individual, here we examine whether overconfidence can incur costs to the collective. Third, the literature on power has found that being put in a low-power position causes individuals to speak less and inhibit themselves (Keltner, Gruenfeld, & Anderson, 2003). The current research examines whether the degree to which people do so depends on the individual who has power over them. That is, individuals in positions of subordination might speak less than those above them on average; yet subordinated individuals might be particularly likely to speak less if the person above them is nonverbally confident.

Study 1

Study 1 aimed to test our primary hypothesis: that a confident demeanor displayed by a powerful individual will decrease others' participation. Participants were randomly paired into dyads to work on a decision-making task; within each dyad they were randomly assigned to a high-power (supervisor) or low-power role (subordinate). Participants were videotaped while working together; independent judges rated nonverbal demeanor and participation. We also examined whether the effects of a confident demeanor on others' participation was unique to powerful

individuals. That is, does the subordinate's nonverbal confidence have any effect on the supervisor's participation?

Method

Participants

Participants were 86 undergraduates (43 dyads), at a West Coast university, paid \$15 each (57 female, 29 male; Age: $M = 20$, $SD = 1.61$).

Procedure

Design. The design was based on previous research (Galinsky, Gruenfeld, & Magee, 2003): participants were randomly assigned to the roles of supervisor and subordinate. They were told their role assignments were based on their work history, measured several days earlier in an online survey. Participants were also told they would be entered into a lottery for a \$50 prize and the supervisor would divvy up the prize and evaluate the subordinate. The subordinate would not evaluate the supervisor or have any influence over the prize money allocation.

Simulation and decision-making task. Two participants were scheduled for each laboratory session, which involved a simulation task adapted from Johnson (1993, 1994). Participants played the manager and employee of a video store tasked with solving problems the store was facing. To prepare for the task, the supervisor read two memos from "Head Office" describing the problems and possible solutions, while the subordinate performed a clerical task that was checked by the supervisor. The supervisor and subordinate were then videotaped in a 15-minute discussion aimed at agreeing on solutions.

Measures

Manipulation check. After the discussion, participants privately rated two statements measuring the degree to which they assumed the high-power role of supervisor: “I was in control during the discussion” and “I led our discussion” (1: *strongly disagree* to 7: *strongly agree*). These items were combined ($\alpha = .84$).

Confident demeanor. The confidence of participants’ demeanor was coded from videotape. We sampled from three nonverbal channels (eyes, body, voice) and chose commonly studied cues: eye contact, postural erectness, and vocal loudness (Awamleh & Gardner, 1999; Driskell et al., 1993; Ridgeway, 1987). Eye contact reflected the amount of time participants looked directly at their partner and was measured in seconds for the entire discussion and divided by the total time the dyad spent working together (Edinger & Patterson, 1983; Murphy, 2007). Posture was rated on a scale from 1 (*slumped*) to 7 (*straight*) and loudness from 1 (*quiet*) to 7 (*loud*) (Murphy, 2007). Participants were also rated on overall nonverbal confidence (1: *uncertain, weak*; 7: *confident, strong*).

The “thin slices” literature has shown that short portions of nonverbal behavior have predictive utility comparable to longer portions (Ambady & Rosenthal, 1992; Murphy, 2005). Further, leaders’ behavior in the beginning of joint deliberations has more impact on the interpersonal dynamic than later behavior (Bass, 2008; Shaw, 1961). Therefore, ratings for posture, loudness, and overall nonverbal style were based on a one-minute slice from the beginning of each interaction. Eye contact was very low in the first minute (participants gazed at the memos while talking), so was measured for the entire discussion. A second judge coded 20% of the videos. The two coders agreed in their judgments of eye contact (r

= .92), posture ($r = .77$), loudness ($r = .70$), and overall nonverbal confidence ($r = .80$). These four measures were also correlated ($\alpha = .70$), and were thus standardized and combined.

Participation. We used speaking time as the measure of participation (Johnson, 1993; Leffler, Gillespie, & Conaty, 1982). Specifically, we used percentage of total speaking time because dyads varied in the total amount of time they worked together ($M = 10.55$, $SD = 3.80$).

Results

A repeated measures ANOVA with the dyad as the unit of analysis and role (supervisor, subordinate) as the within-dyad factor found that supervisors ($M = 5.17$, $SD = 1.07$) reported having more power than did subordinates ($M = 3.42$, $SD = 1.273$), $F(1, 42) = 34.76$, $p < .001$, $\eta^2 = .45$. The manipulation was successful.

To test the hypothesis that the supervisor's confident demeanor would decrease the subordinate's participation, we regressed subordinate participation on the supervisor's confident demeanor, $B = -8.08$, $SE = 2.84$, $\beta = -.41$, $p < .01$, $F(1, 41) = 8.10$, $R^2 = .17$. This indicated that the more confident the supervisor's demeanor, the less the subordinate participated.

To test the robustness of this finding, we next examined the effects of supervisor and subordinate sex, as prior work has shown differences in the way subordinates respond to female and male supervisors (see Eagly, Makhijani, & Klonsky, 1992 for a meta-analysis). We conducted a moderated multiple regression (Aiken & West, 1991) by first centering the variables and found that supervisor sex ($B = -1.26$, $SE = 1.55$, $\beta = -.07$, $p = .42$), subordinate sex ($B = -.71$, $SE = 1.36$, $\beta = -.05$, p

= .61), and both supervisor X subordinate sex ($B = -2.65$, $SE = 1.53$, $\beta = -.16$, $p = .09$), did not significantly moderate the effect of supervisor demeanor on subordinate participation.

Finally, subordinates' confident demeanor did not predict supervisors' participation, $B = -4.48$, $SE = 4.37$, $\beta = -.16$, $p = .312$, $F(1, 39) = 1.05$, $R^2 = .027$. This suggests that a confident nonverbal demeanor dampened others' participation particularly when it is was displayed by the more powerful individual.

Study 2

Study 2 had three aims. First, it aimed to establish the causal priority of the powerful individuals' confident demeanor. To do so we again wanted to involve participants in an actual interaction. Thus, we trained a research confederate to communicate pre-scripted arguments while modifying his nonverbal demeanor across conditions. We used a male confederate across conditions because sex of participants did not moderate the effects in Study 1. Second, we examined the mechanisms underlying the effect of confident demeanor. Building from our arguments in the Introduction section, we examined whether powerful individuals' nonverbal confidence would decrease others' participation because it makes the individual appear more competent, more threatening, or both. Third, we examined performance outcomes. We tested whether people would defer to a confident powerful individual's decision, even when that decision is wrong.

Method

Participants

Seventy-five undergraduates at a West Coast university participated for

course credit. Six participants (2 from confident condition, 4 from not-confident condition) were excluded from the analysis because they entered the discussion having made the same incorrect decision as the confederate, making the discussion unnecessary (see below for details). This left 69 participants (35 male, 34 female; Age: $M = 21$, $SD = 1.89$).

Procedure

Experimental manipulation. Participants arrived at the lab one at a time. All were assigned to a subordinate role and paired with the confederate who played the supervisor. A male confederate blind to the hypotheses played the role of the supervisor in all dyads. Participants were randomly assigned to supervisor demeanor condition (confident vs. not-confident). They were told the study examined employee assessment techniques and they would play the role of employees being assessed. The supervisor was given resource control and evaluative power as in Study 1. Further, pre-interviews with undergraduate students suggested that graduate students possess legitimate authority over undergraduates. Participants were thus told the supervisor was a graduate student. To further establish the supervisor and subordinate roles, the supervisor led the participant through two tasks adapted from Snodgrass (1992): a job interview and puzzle task. The supervisor pretended to make notes evaluating the participant.

To manipulate supervisor demeanor, in the *confident* demeanor condition, he showed frequent and direct eye contact, sat up straight, spoke fluidly and at a comfortable volume, and used broad gestures (Driskell et al., 1993; Ridgeway, 1987). For the *not-confident* demeanor condition, he showed minimal and indirect eye

contact, slumped in his chair, spoke quietly and hesitantly, and used uncertain gestures such as fidgeting.

Decision-making task. The experimenter next introduced the decision-making task and asked the participant to choose the specific task from a box of 20 folders, to give the impression that the supervisor had no previous knowledge of the topic. In fact, all folders contained the same topic, which involved choosing the best of three candidates for a job (for full details of the task, see Peterson, 2001). The experimenter took out of the folder separate packets of information for the supervisor and subordinate: these packets contained a sheet of general information with each job candidate's education and prior experience, and a sheet labeled "confidential information" with each candidate's strengths, weaknesses, and working style. The confidential information was unshared, in that supervisor and subordinate possessed different information. The subordinate's unique information made it clear that one candidate was the least qualified. For example, the candidate was described as not an inspiring speaker, and as having a habit of being late to meetings. (A pre-test gave participants full information from both packets. Only one out of 21 participants chose the weak candidate, $\chi^2 = 10.81, p < .05$, confirming that this candidate appeared the least qualified.)

After reading the information about the candidates, the supervisor and subordinate each privately completed a form indicating their preferred candidate. The experimenter explained the goal of the discussion (to agree on the best candidate for the job), and left the room, giving the dyad up to 10 minutes to reach a joint decision ($M = 8.24$ min, $SD = 2.03$).

The supervisor, who always chose the least qualified candidate and used the same pre-scripted arguments, opened the discussion by stating his preferred candidate and asking the participant for input. The supervisor was trained to remain firm in his choice, but also to avoid pressuring the subordinate to defer, making it clear that it was acceptable to choose the “undecided” option in the end. After reaching a decision, the supervisor summoned the experimenter, submitted the decision form, and left. The participant then filled out an assessment of the supervisor. Finally, the participant was debriefed and questioned for suspicions.

Manipulation Check

A coder who was blind to condition watched a one-minute slice taken from the beginning of each videotaped discussion and rated the confederate’s demeanor (1: *not at all strong and confident*, 7: *extremely strong and confident*). A second coder watched 20% of the videos ($r = .93$).

Measures

Subordinate participation. We used multiple methods to measure subordinate participation, gauging both quantity and content. First, as in Study 1, subordinate speaking time was coded from the videotape and converted to a percentage of total dyad speaking time ($M = 54.32$, $SD = 9.22$). Second, a coder (different from the judge who coded the manipulation check) counted each time the subordinate mentioned a piece of their unique information ($M = 9.03$, $SD = 4.32$). A separate coder watched 20% of the sessions ($r = .91$). Third, subordinates were asked to rate the item, “During the discussion, I pressed to get my points made” on a scale of 1 (*never*) to 9 (*always*) ($M = 6.01$, $SD = 1.74$). We standardized and combined

these three measures ($\alpha = .60$).

Perception of supervisor competence. Subordinates assessed the supervisor's competence using three adjectives (Carli et al., 1995), competent, intelligent, and knowledgeable (1: *not at all*, 9: *extremely*), and rated the statement "I felt the supervisor knew a lot more about the issue than I did" (1: *strongly disagree*, 9: *strongly agree*). The four items were combined ($\alpha = .74$).

Perception of supervisor threat. Perceived threat was assessed using three adjectives (Carli et al., 1995), threatening, intimidating, and condescending (1: *not at all*, 9: *extremely*), which were combined ($\alpha = .70$). Both this and the perceived competence measures are missing for two participants. Perceived competence and threat were not significantly correlated with each other, $r(67) = .20, p = .11$.

Subordinate deference. Because the confederate always selected the worst candidate and never wavered from his initial decision, participants were faced with a choice: they could defer to the supervisor's wrong selection, or they could refuse to defer, leading the dyad to report they were "undecided."

Results

The manipulation was effective, in that the supervisor was rated as more confident in the confident condition ($M = 6.08, SD = 0.73$) than in the not-confident condition ($M = 2.00, SD = 0.83$), $F(1, 67) = 472.00, p < .001, \eta^2 = .88$.

Consistent with Study 1, subordinates participated less when the supervisor exhibited a confident demeanor ($M = -.24, SD = .64$) than when he exhibited a not-confident demeanor ($M = .21, SD = .74$), $F(1, 67) = 7.46, p = .008, \eta^2 = .10$. As in Study 1, this effect was not moderated by sex of subordinate, $F(1, 66) = .60, p = .44$.

The supervisor was perceived as more competent when he exhibited a confident demeanor ($M = 6.83$, $SD = 0.86$) than a not-confident demeanor ($M = 5.58$, $SD = 0.98$); $F(1, 65) = 31.09$, $p < .001$, $\eta^2 = .32$. Unexpectedly, he was also seen as more threatening when exhibiting a confident demeanor ($M = 3.81$, $SD = 1.53$) than a not-confident demeanor ($M = 2.76$, $SD = 1.07$), $F(1, 65) = 10.42$, $p = .002$, $\eta^2 = .14$.

A simultaneous test of both mediators with OLS regression using a bootstrapping technique (Preacher & Hayes, 2008) found that the 95% bias-corrected confidence interval for the effect size of the indirect path through perceived competence was $-.53$ to $-.02$ and did not include zero, indicating perceived competence was a significant mediator. However, the indirect path for perceived threat ($-.26$, $.04$) did include zero, which indicates a nonsignificant effect.

A chi-square analysis revealed that 69% of subordinates in the confident condition deferred to the supervisor's incorrect decision, leading the dyad to select the wrong candidate, as compared to 42% in the not-confident condition, $\chi^2(1, N = 69) = 5.12$, $p = .024$, odds ratio = 3.07.

Study 3

In Study 3 we examined whether the effects of a powerful individual's confident demeanor on others' participation might be mitigated when that individual also nonverbally conveys openness to others' input. A consistent theme in prior research is that people speak up more when they perceive those in power to be open to their opinions and ideas (Detert & Burris, 2007; Edmondson, 1999). A sense of openness to others' input can be conveyed through nonverbal behavior (Gorden, 1975; Heller, 1972; Mehrabian, 1972). It is thus possible that even when

powerful individuals exhibit a confident demeanor, the impact of that confidence is diminished when it is combined with a generally open demeanor. We used a similar design to Study 2, except that we manipulated the powerful individual's nonverbal openness as well as confidence. We also hired a professional actor for the confederate role because of the challenge of combining different levels of confidence and openness.

Method

Participants

Participants were 79 undergraduates at a university in the United Kingdom who were paid £10 (\$15) each. Four participants were excluded from the analysis when they entered the decision-making discussion having chosen the same candidate as the supervisor. This left 75 participants (33 male, 42 female; Age: $M = 20$, $SD = 1.55$).

Procedure

The experiment used a 2 (confident vs. not confident supervisor demeanor) X 2 (open vs. closed supervisor demeanor) factorial design. The supervisor's confident demeanor was manipulated in the same way as in Study 2. To manipulate open demeanor, in the *open* condition, the confederate oriented his body toward the participant, uncrossed his arms and legs, and nodded and made eye contact while listening (Gorden, 1975; Heller, 1972; Mehrabian, 1972).¹ In the *closed* condition, the confederate oriented his body away from the participant (placed his chair at an

¹ Note that this differs from eye contact in the confident condition in that eye contact while *speaking* conveys confidence (Carney, Hall, & LeBeau, 2005), whereas eye contact while *listening* conveys interest in what is being said (Gorden, 1975; Heller, 1972).

angle) and did not nod or make eye contact while listening. To ensure that the differences in supervisor openness across conditions were salient to participants, in the *open* condition the confederate began by saying, “What do you think?” but in the *closed* condition said, “So I’ll go ahead and put that [his preference] down, shall I?”

Participants arrived at the lab one at a time and were randomly assigned to one of the four conditions. The task and procedure were identical to Study 2.

Manipulation Checks

The supervisor’s demeanor was judged by coders who were blind to condition and watched a one-minute slice taken from the beginning of the videotaped discussions. One coder rated the supervisor’s confident (1: *not at all strong and confident*, 7: *extremely strong and confident*) and open demeanor (1: *not at all open and inviting*, 7: *extremely open and inviting*). A second coder watched 27% of the dyads and achieved high inter-coder reliability for confident ($r = .92$) and open ($r = .81$) demeanor.

Measures

Subordinate participation. Subordinate participation was measured as in Study 2 ($\alpha = .61$). Speaking time and sharing of unique information were coded by different coders. A second coder watched 27% of the dyads (speaking time $r = .97$, unique information $r = .88$).

Subordinate deference. As in Study 2, the supervisor always supported the worst candidate, leaving the participant to either defer to the supervisor’s poor choice, or refuse to defer, forcing the dyad to opt for “undecided.”

Results

The confederate exhibited a more confident demeanor in the confident condition ($M = 6.05, SD = 0.66$) than the not-confident condition ($M = 3.05, SD = 0.82$), $F(1, 71) = 357.46, p < .001, \eta^2 = .83$). He also exhibited a more open demeanor in the open condition ($M = 5.50, SD = 0.92$) than in the closed condition ($M = 2.89, SD = 0.77$), $F(1, 71) = 188.55, p < .001, \eta^2 = .73$). No other effects emerged, all $p > .30$. This suggests the manipulations were effective.

As in Studies 1 and 2, subordinates participated less when the supervisor exhibited a confident demeanor ($M = -.27, SD = 0.86$) than a not-confident demeanor ($M = .28, SD = 1.07$), $F(1, 69) = 6.37, p = .014, \eta^2 = .08$. However, this effect was qualified by a significant interaction, $F(1, 69) = 5.28, p = .025, \eta^2 = .07$. Subordinates participated the least when the supervisor exhibited a confident-closed ($M = -.57, SD = 0.79$) demeanor compared to a confident-open ($M = .06, SD = 0.82$; $F(1, 36) = 5.88, p = .021, \eta^2 = .14$), not confident-open ($M = .11, SD = 1.31$) or not confident-closed ($M = .48, SD = 0.67$; $F(1, 35) = 18.54, p < .001, \eta^2 = .35$) demeanor. Therefore, the negative effect of confident demeanor on subordinate participation was mitigated when the powerful individual also exhibited an open demeanor. No other comparisons were significant, all $p > .31$.

Consistent with Study 2, a chi-square analysis revealed that 92% of subordinates in the confident demeanor condition deferred to the supervisor's poor decision as compared to 68% in the not-confident demeanor condition, $\chi^2(1, N = 75) = 7.06, p = .008$, odds ratio = 5.61. To examine whether supervisor open demeanor moderated this effect, we conducted a hierarchical loglinear analysis because all

three variables are dichotomous (Field, 2005). Deference rates were 94% in the confident-open condition, 90% in the confident-closed condition, 70% in the not confident-open condition, and 65% in the not confident-closed condition. Specific two-way interactions were assessed using backward elimination. Only the two-way interaction between confident demeanor and deference was found to be significant, $\chi^2(1) = 7.44, p = .006$. Therefore, while supervisor open demeanor mitigated the effect of confidence on subordinate participation, it did not do so for subordinate deference.

General Discussion

Summary of Findings

In three studies, all involving live interactions, we found that when powerful individuals conveyed a confident nonverbal demeanor in a joint decision-making task, others participated less in the task – and did so because they viewed the powerful individual as more competent. We also found that people deferred to confident powerful individuals' opinions even when those opinions were incorrect, which resulted in poorer joint performance. Finally, when the powerful individual nonverbally conveyed openness to others' input, this partially mitigated the effects of their confidence on others' participation.

Contributions

The present research makes a number of important contributions. First, it helps identify when and why hierarchies can damage group processes and performance. It has been shown that groups systematically promote confident and even overconfident individuals into positions of power and status (e.g., Anderson,

Brion, Moore, & Kennedy, 2012). The current research suggests that this pervasive pattern might inadvertently damage collective performance: when individuals who occupy powerful positions nonverbally convey confidence, they can dampen others' participation and even group performance when their confidence is misplaced.

Second, it contributes to the literature on confidence and overconfidence. We highlight an unfortunate irony, that a confident nonverbal demeanor helps individuals attain positions of power because it makes them appear more competent. Therefore, overconfidence can provide social benefits to the individual. Yet when those individuals attain power, that same confident demeanor can inadvertently stifle others' participation – precisely because it makes them appear competent. Overconfidence can incur costs to the collective for the same reason it provides benefits to the individual.

Third, the present research contributes to the literature on the psychological effects of possessing high or low power, which has found that subordination decreases participation (e.g., Keltner et al., 2003). The current research shows that this effect depends on who is in power: When powerholders are nonverbally confident, the effects of subordination are exacerbated and subordinates are even less likely to voice their opinions and ideas.

Limitations and Future Research

There were numerous strengths to the data. Rather than rely on vignettes, all three studies involved participants interacting in dyads. They used both correlational (Study 1) and experimental (Studies 2 and 3) designs and trained confederates to manipulate leader demeanor. They also involved multiple data

sources, including independent judges' ratings of nonverbal behavior, self-reports, and peer-reports. However, there were also limitations. In particular, all were conducted in the laboratory with undergraduate students and focused on unfamiliar dyads. Future research should examine the generalizability of the findings in the field, with older adults, and among pairs that have worked together for a longer period of time. Further, while we found that an open nonverbal demeanor mitigated the effect of confidence on participation, it did not moderate the effect on deference to the powerful individual's flawed opinion. Future research should explore factors that do so effectively.

Conclusions

Much research has shown that conveying confidence helps individuals appear more competent and ascend social hierarchies. The current studies suggest that this pervasive pattern might have some negative consequences: namely, after attaining a powerful position, individuals' confidence might stifle others' participation and lead to poorer joint outcomes. These results do not necessarily suggest that individuals in positions of power should avoid conveying confidence, but instead that individuals in power should be aware of the full effects of their confidence. Moreover, our results suggest that those beholden to the powerful should beware of ceding to confidence even when confidence is not warranted.

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