

RESEARCH REPORT

Perceived Misalignment of Professional Prototypes Reduces
Subordinates' Endorsement of Sexist SupervisorsFelix Danbold¹ and Corinne Bendersky²¹ Department of Organisations and Innovation, University College London School of Management² Department of Management and Organizations, University of California, Los Angeles, Anderson School of Management

Despite decades of efforts, many organizations still have *sexist supervisors*—those in supervisory positions who define their profession by primarily stereotypically masculine features. As a result of their “masculine” professional prototypes, sexist supervisors see their work as a “man’s job” in which women cannot succeed. Research suggests that one problem posed by sexist supervisors is that they may pass their biased views on to subordinates who endorse them as leaders. To make this less likely, we test in two experiments ($N = 1,879$) a strategy to reduce subordinates’ endorsement of sexist supervisors. We do this by encouraging subordinates to see themselves as low in *perceived professional prototype alignment* (PPPA)—the extent to which a subordinate perceives their supervisor to share their beliefs about what it means to be a member of their profession—with sexist supervisors. Specifically, encouraging subordinates’ to hold less masculine, more “balanced” professional prototypes, in which they see stereotypically feminine attributes as equally important to the job as stereotypically masculine ones, reduces PPPA with sexist supervisors. Lowering PPPA, in turn, reduces supervisor endorsement, even after accounting for the effects of other established mechanisms of supervisor endorsement. This research sheds new light on the psychology of followership and offers a new way to curb gender bias from the bottom up.

Keywords: gender, diversity, leadership, followership, group prototypes

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Minimizing bias against women in historically male-dominated¹ professions has been a focus of organizational research for decades (e.g., Colella et al., 2017). Most research in this area has aimed to reduce the impact of bias on individuals’ decision-making and behavior (e.g., He & Kang, 2021; Joshi et al., 2015). Such efforts may be thwarted, however, in contexts where those in power cling to views and practices that are discriminatory to women (e.g., Cortina & Berdahl, 2008; Dobbin & Kalev, 2019). We identify *sexist supervisors* as those in supervisory positions who hold a “masculine” professional prototype (i.e., they define their profession by primarily stereotypically masculine features) and as a result, see their work as a “man’s job” in which women cannot succeed.² Because of these biased views, sexist supervisors pose a direct threat

to gender equality in the workplace. Equally troubling is the fact that sexist supervisors may transmit their bias to their subordinates. Subordinates who endorse sexist supervisors (i.e., see them as good leaders, worth following) are at risk of adopting their supervisor’s views about women in their profession (Haslam et al., 2011; Hogg, 2020). Although organizations can and should try top-down strategies to debias and disempower sexist supervisors (e.g., mandatory trainings, demotions), here we explore addressing this issue from the bottom up by testing a novel strategy for reducing subordinates’ endorsement of sexist supervisors in male-dominated professions.

A defining aspect of sexist supervisors is that they see their professional prototype (the set of features that define what a member of their profession is and should be like; Mummendey & Wenzel, 1999; Turner et al., 1987) as comprised predominantly of stereotypically masculine features. Extensive research shows that when people hold masculine professional prototypes, they struggle to envision women succeeding within a given profession (e.g., Cheryan & Markus, 2020; Heilman & Caleo, 2018). We test if it is possible to discourage subordinate endorsement of sexist

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¹ Although we use sex and gender interchangeably in this article, they are distinct. We encourage future research to explore our findings through the eyes of noncisgender people.

² Although it is possible to imagine sexist supervisors who are biased against men (i.e., those who see a certain profession as a “woman’s job” in which men cannot succeed), our focus here is on the more pervasive problem of sexist supervisors who are biased against women. Similarly, although women may be sexist supervisors, we focus on the male sexist supervisors who are more prevalent in the male-dominated professions we are studying.

supervisors specifically on the basis of their masculine professional prototypes. Building on scholarship underscoring the importance of perceived subordinate–supervisor similarity (e.g., Liden et al., 1993) and shared group prototypes (e.g., Hogg, 2001), we propose that encouraging subordinates to see the masculine prototypes held by sexist supervisors as inconsistent with their own professional prototype will decrease their likelihood of endorsing sexist supervisors. We term this novel mechanism *perceived professional prototype alignment* (PPPA)—the extent to which subordinates feel that their supervisor shares their beliefs about what it means to be a member of their profession. In addition to the applied value of this research for curbing gender bias from the bottom up, introducing PPPA as a new mechanism of supervisor endorsement enriches our understanding of the complex psychological processes that shape followership (e.g., Uhl-Bien et al., 2014).

Influencing Subordinates' PPPA

Recent research shows that professional prototypes can be conceptualized as a constellation of features varying in perceived importance (Danbold & Bendersky, 2020). For example, in the highly masculine profession of firefighting, stereotypically masculine features (e.g., physical strength, courage) are often perceived as more essential to success in the profession than legitimately important, but stereotypically feminine features (e.g., compassion, patience) (Bendersky, 2018; Chetkovich, 1997). In contrast to a masculine professional prototype (e.g., seeing physical strength as more important than compassion), Danbold and Bendersky (2020) demonstrated that reminding people of the legitimate importance of stereotypically feminine features can make the professional prototype more balanced, such that people do not systematically value stereotypically masculine or feminine features over one another (i.e., they see compassion as equally important as physical strength), thereby neutralizing the otherwise positive association between masculinity and expected success in the profession.

We leverage this approach to balancing professional prototypes to test hypotheses about PPPA. We predict that subordinates can infer, based on words and actions, that a sexist supervisor holds a masculine professional prototype. When the subordinate also holds a masculine professional prototype, they would conclude that they and the sexist supervisor are on the same page about what it means to be a member of their profession and be high in PPPA. However, if we encourage that subordinate to hold a more balanced professional prototype, they would look at their sexist supervisor and conclude that they perceive their professional prototypes differently, thereby reducing PPPA. The same prototype balancing intervention should also increase the subordinates' PPPA with pro-gender diversity supervisors—those whose words and actions suggest they also hold balanced prototypes (Danbold & Bendersky, 2020).

Hypothesis 1: Subordinates holding a balanced (vs. a masculine) professional prototype will report (a) less PPPA with sexist supervisors and (b) greater PPPA with pro-gender diversity supervisors.

PPPA as a Mechanism of Supervisor Endorsement

If, as predicted, balancing subordinates' professional prototypes decreases their PPPA with sexist supervisors (and vice versa with pro-gender diversity supervisors), we expect this to have a downstream

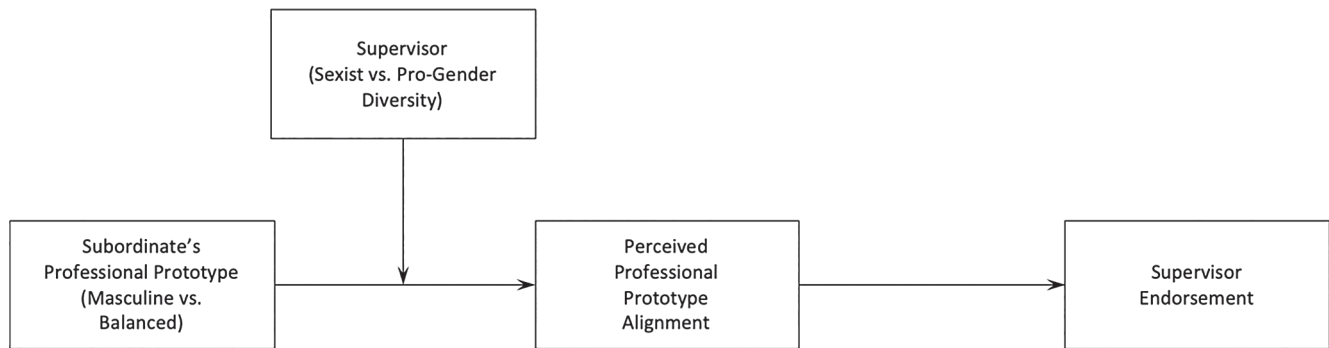
negative effect on their endorsement of these supervisors (i.e., their recognition of them as good leaders, worth following). This prediction is informed by two broad insights from the followership literature about the mechanisms of supervisor endorsement. The first is that prototypes play an important role in determining which supervisors that subordinates endorse as leaders. Extensive research shows that subordinates endorse those supervisors who they see as prototypical, or representative, of what they think that leaders are like (Lord et al., 1980). Although often sensitive to context (e.g., Lord et al., 1984), people hold a schema of the features (i.e., observable traits or attributes) of leaders in general, and endorse supervisors whose personal features match the features that comprise their general leader prototype (Epitropaki & Martin, 2004). Others have argued that the more relevant prototype is that of the shared group (Hogg, 2001; van Knippenberg, 2011). This research shows that subordinates also endorse supervisors based on the similarity between the supervisor's features and the features they see as defining their shared group (e.g., Barreto & Hogg, 2017; Steffens et al., 2020). Although PPPA is the distinct process of assessing the perceived similarity of two professional prototypes (cf. prototypicality judgments based on comparing the features of a supervisor against those of a prototype), these existing mechanisms indicate that prototypes are salient in subordinates' minds when making supervisor endorsement judgments.

The second stream of research that informs PPPA shows that subordinates positively evaluate supervisors who are similar to themselves. Although similarity in terms of attitudes (Engle & Lord, 1997; Liden et al., 1993), values (Hayibor et al., 2011; Kemelgor, 1982), personality (Zhang et al., 2012), and goals (Bouckennooghe et al., 2015) are all associated with better supervisor–subordinate outcomes, this body of research also shows that the basis of similarity assessments matters. We propose that subordinates' perceptions that a supervisor holds a similar professional prototype (i.e., shares their beliefs about what it means to be a member of their profession) is a similarity judgment that is distinctly influential from other aspects of similarity, given the importance of prototypes to a shared sense of professional identity. We predict, therefore, that PPPA will positively predict supervisor endorsement, such that there will be an indirect effect (IE) of our prototype manipulations on supervisor endorsement through PPPA.

Hypothesis 2: (a) Encouraging a balanced (vs. a masculine) professional prototype for subordinates will lead to a significant negative indirect effect on their endorsement of sexist supervisors through PPPA, and (b) encouraging a balanced (vs. a masculine) professional prototype for subordinates will lead to a significant positive indirect effect on their endorsement of pro-gender diversity supervisors through PPPA.

We display our full theoretical model in Figure 1. Although we hypothesize that PPPA will impact evaluations of both sexist and pro-gender diversity supervisors, we are especially interested in it as a practical tool to discourage the endorsement of sexist supervisors so as to disrupt the perpetuation of gender bias in male-dominated professions. Therefore, we test our hypotheses in the context of the U.S. professional fire service, which has persisted in having more than 94% men despite several decades of gender diversity efforts (Bendersky, 2018; Bureau of Labor Statistics, 2020). We verify in a pilot study that sexist supervisors hold more masculine professional prototypes than do pro-gender diversity supervisors, and there are

Figure 1
Theoretical Model



sexist supervisors present in the fire service. We then test our hypotheses in two vignette experiments using large samples of general population members.

Pilot Field Study

Before testing our hypotheses, we surveyed 76 fire service professionals in supervisory positions to test our assumption that sexist supervisors hold masculine professional prototypes (see Appendix A of the Supplemental Materials for full results). We first asked them to rate the perceived essentiality of 14 traits for success in the fire service (e.g., physical strength, courage, ability to work in teams, patience, empathy). Following Danbold and Bendersky (2020), we represented professional prototypes as the relationship between these essentiality ratings and stereotypical masculinity ratings of each trait independently rated by a separate MTurk sample ($N = 304$). A positive relationship between trait masculinity and essentiality represented a masculine professional prototype and a neutral relationship between them represented a balanced professional prototype.

Overall, our sample held a masculine professional prototype with a significantly positive association between trait masculinity and essentiality ($B = 0.24$, 95% CI [0.14, 0.34], $p < .001$, $\eta^2 = 0.02$). Consistent with our theorizing, however, this effect was moderated by the extent to which supervisors endorsed sexist attitudes. Supervisors who reported low support for gender diversity efforts, low valuation of inclusion and tolerance, and high valuation of tradition held the most masculine professional prototypes (B s range from 0.40 to 1.04, all $ps < .001$). More pro-gender diversity supervisors (i.e., those high in support for gender diversity efforts, high in valuing inclusion and tolerance, and low in valuing tradition), in contrast, held more balanced professional prototypes (B s range from -0.13 to 0.09, all $ps \geq .162$). This pilot study confirms our definition of sexist supervisors as holding masculine professional prototypes.

Studies A and B

We developed a vignette experiment about the fire service with a 2×2 experimental design. First, we manipulated participants' (the subordinates') professional prototypes to be either balanced or masculine. Second, we manipulated whether the supervisor being evaluated (a Captain in a fire department) was either sexist or pro-gender diversity. We tested this across two high-powered samples, with Study B functioning as a preregistered replication of Study A.

Transparency and Openness

All data, syntax, output (<https://osf.io/z5r2s/>), and preregistration (<https://osf.io/esjhz>) are available on the Open Science Framework. Verbatim research materials are provided in the Supplemental Materials. Research Protocol No. 16-001631: Examining Inclusive Leadership in the Fire Service was approved by the University of California, Los Angeles (UCLA), Research Administration's institutional review board. Analyses were conducted in Stata 16 and comply with the *Journal of Applied Psychology* (JAP) methods checklist.

Method

Samples and Participants

Study A. Nine hundred ninety-nine U.S.-based participants recruited through Prolific (Peer et al., 2017) participated in our study and were paid \$2.00. The study was advertised as about their perceptions of a leader in the field of firefighting. G*Power predicted a sample size of 787 to detect a small effect (.10), and we oversampled given our planned exclusion criteria described below. Fifty-four percent were women,³ they were 33.32 years old on average ($SD = 11.70$), and 68% were White Americans.

Study B. Recruitment and payment of 1,189 participants was identical to Study A. Participants from Study A were not allowed to participate in Study B. Power analysis using a simulation (Lane et al., 2018) based on preliminary results from Study A suggested that for .80 power to detect the predicted interaction effect of our manipulations on PPPA, we need at least 880 responses. Given that we again planned to exclude some participants, we targeted a sample of 1,200 U.S.-based participants. Forty-nine percent were women,

³ Although preregistered as a potential control, analyses of participant gender revealed that it did not affect patterns of reported results as a control nor was it a significant predictor of PPPA or supervisor endorsement. This is consistent with our theorizing that what matters is the professional prototype of the subordinate, that both men and women can hold a masculine professional prototype, and that both are sensitive to our prototype manipulation. We also preregistered additional potential control variables of perceived leader effectiveness: participant race and political ideology. None of these additional control variables significantly affected the dependent variables or changed the pattern of reported results. For parsimony, we do not report analyses including them.

they were 35.28 years old on average ($SD = 12.26$), and 72% were White Americans.

Manipulations

Participants were randomly assigned to a 2 (prototype condition: balanced vs. masculine) \times 2 (supervisor condition: sexist supervisor vs. pro-gender diversity supervisor) between-subjects experimental design.

Prototype Manipulation. In both prototype conditions, to provide context, participants first watched a video informing them about modern firefighting (see Appendix B of the Supplemental Materials). Participants in the masculine prototype condition (coded 1 in analyses, $N_{\text{Study A}} = 435$, $N_{\text{Study B}} = 511$) then watched a video of a professional White, male firefighter explaining that physical strength, team orientation, and compassion are important traits for being a successful firefighter, but that physical strength is the most important trait. Participants in the balanced prototype condition (coded 2 in analyses, $N_{\text{Study A}} = 410$, $N_{\text{Study B}} = 523$) watched the same video, but with the traits listed in the inverse order, with compassion identified as the most important trait. Danbold and Bendersky (2020) showed that this manipulation encourages participants to hold a balanced (rather than a feminized) version of the prototype by counterbalancing participants' baseline masculine prototypes.⁴

Supervisor Manipulation. Next, we asked participants to imagine that they were a firefighter working on a crew reporting to a male supervisor, Captain Jones (see Appendix C of the Supplemental Materials). To make the manipulation realistic, in both conditions, we described Captain Jones' personal values (i.e., "He is deeply religious and politically identifies as a conservative, but is not extreme in either belief"), appearance ("just over six feet tall, White, middle-aged, and has strong facial features and an athletic build"), and similarity to other firefighters (he has "a lot in common with most other firefighters."). We also described some supervisory tasks ("He makes sure that everyone is always training and conducts rigorous drills regularly in the fire station.") and his personality ("Captain Jones is that he's not the most warm and supportive person you've ever met.") in ways designed to avoid ceiling effects.

The key information that varied across conditions was whether or not Captain Jones was sexist (coded 1 in analyses, $N_{\text{Study A}} = 436$, $N_{\text{Study B}} = 523$) or pro-gender diversity (coded 2 in analyses, $N_{\text{Study A}} = 409$, $N_{\text{Study B}} = 511$). This information was presented in the final paragraph of the description, stating that Captain Jones believed that "efforts to increase the number of women firefighters are well-intentioned [but misplaced/and worth supporting]" and that "firefighting is [fundamentally a masculine profession/not necessarily a masculine profession]." By manipulating only Captain Jones' sexism and not his values, traits, behaviors, or personality, we aimed to precisely influence perceptions of Captain Jones' professional prototype.

Measures

All items were measured on a scale from 1 = *strongly disagree* to 7 = *strongly agree*. A list of verbatim scale items is provided in Appendix D of the Supplemental Materials.

PPPA. We asked participants to

take a moment to think about the following question—what does it mean to be a true or ideal member of your profession? Now think about how Captain Jones would answer that question and the extent to which your beliefs are similar.

We then asked participants to indicate their agreement with three statements: (a) "Captain Jones generally agrees with my beliefs about what makes a great member of my profession," (b) "Captain Jones shares my opinion about what is important in a member of my profession," and (c) "Captain Jones' perceptions of what matters to being a successful member of my profession largely overlap with mine."

Supervisor Endorsement. To measure supervisor endorsement, we adapted items from Platow and van Knippenberg (2001). We asked participants to indicate their agreement with the following statements: (a) "If I could choose to follow any Fire Captain I would choose Captain Jones," (b) "Captain Jones is an excellent Fire Captain," and (c) "I do not think Captain Jones is a good Fire Captain" (reverse-coded).

Alternate Mechanisms. To establish the robustness and distinctness of PPPA as a mechanism of supervisor endorsement, in secondary analyses, we included perceived value congruence, perceived group prototypicality, and perceptions of general leader prototypicality as parallel mediators. Although, as noted above, the concept of PPPA was inspired by these existing mechanisms of supervisor endorsement, we argue that PPPA is a theoretically distinct and a particularly well-suited mechanism for reducing subordinates' endorsement of sexist supervisors.

PPPA operates when subordinates compare their professional prototype against the inferred professional prototype of their supervisor. This prototype-to-prototype comparison process differs from existing mechanisms based on feature-to-prototype comparison processes. For example, perceptions of general leader prototypicality involve subordinates comparing the features of a supervisor (e.g., their appearance, personality, and other attributes) against the set of features that they see as defining leaders in general (Epitropaki & Martin, 2004; Lord et al., 1980). Perceptions of group prototypicality involve similar comparisons against the set of features that they see as defining their shared group (Hogg, 2001; van Knippenberg & van Knippenberg, 2005). Although likely positively correlated with PPPA, the conceptual distinctions between PPPA and these feature-to-prototype comparison processes suggest they will affect endorsement judgments differently, especially in response to the prototype balancing manipulation we test. For

⁴ Study A contained additional reinforcement of the prototype manipulation (and a similar reinforcement for the supervisor manipulation) in which participants rated the perceived essentiality of various professional traits. Per Danbold and Bendersky (2020), we conducted a manipulation check based on the perceived essentiality of the manipulated traits of physical strength, team orientation, and compassion. As expected, participants rated physical strength as more important in the masculine condition ($M = 6.65$, $SE = 0.04$) than the balanced condition ($M = 6.39$, $SE = 0.05$, $p < .001$, Cohen's $d = 0.28$). Participants rated compassion as more important in the balanced condition ($M = 6.57$, $SE = 0.05$) than in the masculine condition ($M = 6.11$, $SE = 0.06$, $p < .001$, $d = 0.40$). Participants' ratings of team orientation did not differ by condition (masculine: $M = 6.50$, $SE = .04$; balanced: $M = 6.50$, $SE = .05$, $p = .986$, $d < .001$). Although this confirmed the effectiveness of our prototype manipulation, because it was unrealistic that real subordinates would be taking such detailed inventory of their professional prototypes, we excluded this reinforcement in Study B, offering a more conservative test of our hypotheses.

example, a pathway through perceptions of group prototypicality would involve subordinates contrasting the numerous observable features of a sexist supervisor against the features of the subordinates' perceived professional prototype. A prototype balancing manipulation may decrease perceived group prototypicality based not only on the supervisor's sexist attitudes but also on potentially unrelated features, such as the supervisor's stereotypically masculine appearance. In contrast, a prototype balancing intervention affects supervisor endorsement through PPPA directly on the basis of supervisors' sexist beliefs (i.e., the inconsistency between the sexist supervisor's masculine prototype and the subordinates' balanced prototype). Therefore, although both mechanisms could have parallel indirect effects, we expect PPPA to more reliably decrease endorsement of sexist supervisors in response to prototype balancing than these kinds of prototypicality judgments.

PPPA is also distinct from other seemingly related similarity-based mechanisms like perceived value congruence (the subordinate's belief that a supervisor has similar values; Hayibor et al., 2011). PPPA is better suited to the applied aims of this research because the basis of the similarity assessment, professional prototypes, is likely to be more malleable than are deeply held values, which are relatively resistant to external influence (Schwartz et al., 2012). Because organizations frequently revise their professional prototypes (e.g., Bartel & Wiesenfeld, 2013), their hand is already on the metaphorical lever to target PPPA.

Perceived Value Congruence. We measured participants' perceptions of the degree to which they felt their values were congruent with their supervisor's, by adapting a two-item scale from Hayibor et al. (2011). We asked participants to "please think about the values Captain Jones holds and how they compare with yours" and indicate their agreement with the following statements: (a) "My basic beliefs about what is important in life are identical to Captain Jones'," (b) "I deeply believe in the same ultimate values as Captain Jones does."

Group Prototypicality. We measured participants' perceptions of the degree to which they felt their supervisor was representative of their group prototype using three items adapted from van Knippenberg and van Knippenberg (2005). We asked participants to "please think about the various traits that Captain Jones possesses and how they compare to the traits of other firefighters" and indicate their agreement with the following statements: (a) "Captain Jones is a good example of the kind of people who are firefighters," (b) "Captain Jones represents what is characteristic of firefighters," (c) "Captain Jones has a lot in common with firefighters."

General Leader Prototypicality. We measured participants' perceptions of the degree to which they felt their supervisor was representative of their general leader prototype. For simplicity, rather than using the multi-item measures typically used to study implicit leadership theories (e.g., Epitropaki & Martin, 2004), we adapted the measures we used for group prototypicality, but shifted the benchmark against which the supervisor was being evaluated to be subordinates' general leader prototypes. We asked participants to "please think about the various traits that Captain Jones possesses and how they compare to the traits of other leaders in general (not just those in the fire service)" and indicate their agreement with the following statements: (a) "Captain Jones is a good example of a leader," (b) "Captain Jones represents what is characteristic of leaders in general," (c) "Captain Jones has a lot in common with other leaders."

Construct Validation. To demonstrate the discriminant validity of PPPA, we asked a separate sample of 499 MTurk participants to complete our PPPA scale and the three alternate mechanisms of supervisor endorsement. The results of comparative confirmatory factor analyses (CFAs) indicate that our predicted model with four latent factors was a better fit than three alternative models that combined PPPA with one of the other latent factors (see Appendix E of the Supplemental Materials).

Supervisor Likeability Control Variable. Because sexist supervisors may face a likeability penalty for going against current pro-diversity norms (e.g., Bell & Hartmann, 2007), and because our central constructs all tap into distinct aspects of positive leader evaluations, we also measured *supervisor likeability*. We control for supervisor likeability as part of our robustness checks with an adapted three-item scale from Johnson et al. (2008; e.g., "I like Captain Jones").

Data Quality Checks. To ensure attentiveness, we excluded 110 participants from Study A and 113 participants from Study B who failed a factual recall check (Kane & Barabas, 2019) at the end of our survey asking if the text they read indicated that Captain Jones believed that firefighting was "fundamentally a masculine profession" (sexist supervisor condition) or "not necessarily a masculine profession" (pro-gender diversity supervisor condition). Although not explicitly preregistered, we also ensured attentiveness by excluding participants who failed to complete all of our primary dependent variables (DVs), excluding an additional 16 participants from Study A and 23 participants from Study B. This step had the added benefit of allowing us to contrast analyses with and without our controls with a consistent set of participants. We also aimed to ensure naivete by excluding an additional 27 participants from Study A and 22 participants from Study B who indicated that they had recently participated in a "very similar" study. Excluding participants based on these criteria does not substantially change the patterns of results that we report, but we present results excluding participants who failed these data quality checks. Our final sample size is 845 participants for Study A and 1,034 for Study B.

Results

Replicating our construct validations study, we conducted a CFA with five latent variables (PPPA, value congruence, group prototypicality, leader prototypicality, and likeability), which fit the data well. Study A: $\chi^2(67) = 341.804, p < .001$; comparative fit index (CFI) = .976; root mean square error of approximation (RMSEA) = .070; standardized root mean square residual (SRMR) = .033. Study B: $\chi^2(67) = 408.936, p < .001$; CFI = .976; RMSEA = .070; SRMR = .032. We report α s (correlations for the two-item perceived value congruence scale), means, standard deviations, skewness, and interitem correlations in Table 1 (Study A) and Table 2 (Study B).

Although not preregistered, we also tested assumptions about equality of variance with a Levene's test (Lim & Loh, 1996) on PPPA. This revealed a significant test statistic in both samples, Study A, $W(1, 843) = 74.17, p < .001$; in Study B, $W(1, 1,032) = 158.31, p < .001$, with similar results for other DVs. After reviewing the literature and speaking to a statistical consultant, we conducted bootstrapped regressions, which are more robust to heteroscedasticity (Stine, 1989), rather than our planned analytical strategy. Specifically, we conducted ordinary least squares (OLS) regression analyses with bootstrapped standard errors using 5,000 replications on our DVs of our manipulations

Table 1
Study A Descriptives and Interitem Correlations

Variable	Supervisor endorsement	PPPA	Value congruence	Group prototypicality	Leader prototypicality	Supervisor likeability
α/r	.79	.93	.87	.89	.85	.94
Mean	4.81	5.03	4.12	5.36	5.23	4.65
SD	1.34	1.40	1.68	1.14	1.17	1.47
Skewness	-.49	-.82	-.10	-.83	-.68	-.42
Supervisor endorsement	—					
PPPA	.73***	—				
Value congruence	.68***	.71***	—			
Group prototypicality	.62***	.62***	.53***	—		
Leader prototypicality	.71***	.69***	.64***	.66***	—	
Supervisor likeability	.80***	.72***	.76***	.62***	.70***	—

Note. PPPA = perceived professional prototype alignment. $N = 845$.
 *** $p < .001$.

and their interaction without the control variable or parallel mediators. We also ran planned contrasts tests examining the effect of the prototype manipulation within each condition of the supervisor manipulation (i.e., if participants in the balanced vs. masculine prototype conditions reported lower PPPA with the sexist Captain).

Manipulation Effects on PPPA

In Study A, we observed a significant main effect of our prototype manipulation ($B = -0.40$, 95% CI $[-0.69, -0.11]$, $p = .006$, $\eta_p^2 < 0.01$), a significant main effect of our supervisor manipulation ($B = 0.74$, $[0.51, 0.98]$, $p < .001$, $\eta_p^2 = 0.13$), and a significant interaction between the two ($B = 0.51$, $[0.16, 0.86]$, $p = .004$, $\eta_p^2 = 0.01$). The left-hand chart in Figure 2 shows the pattern of the interaction. Consistent with Hypothesis 1a, planned contrasts revealed that participants evaluating the sexist supervisor scored significantly lower PPPA when in the balanced prototype condition ($M = 4.34$, $SE = 0.11$) than in the masculine prototype condition ($M = 4.74$, $SE = 0.09$, $p = .006$, Cohen's $d = 0.25$). Participants evaluating the pro-gender diversity supervisor were not significantly different in PPPA when in the balanced prototype condition ($M = 5.59$, $SE = 0.07$) than in the masculine prototype condition ($M = 5.48$, $SE = 0.07$, $p = .263$, $d = 0.10$), so Hypothesis 1b was not supported.

In Study B, we observed a significant negative main effect of our prototype manipulation ($B = -0.28$, $[-0.56, -0.00]$, $p = .047$, $\eta_p^2 < 0.01$), a significant positive main effect of our supervisor manipulation ($B = 0.97$, $[0.75, 1.19]$, $p < .001$, $\eta_p^2 = 0.14$), and a nonsignificant interaction between the two ($B = 0.27$, $[-0.06, 0.60]$, $p = .108$, $\eta_p^2 < 0.01$). The right-hand chart in Figure 2 shows the pattern of the interaction. Despite the nonsignificant omnibus interaction, consistent with Hypothesis 1a, planned contrasts revealed that participants evaluating the sexist supervisor again scored lower in PPPA when in the balanced prototype condition ($M = 4.42$, $SE = 0.11$) than in the masculine prototype condition ($M = 4.70$, $SE = 0.09$, $p = .047$, $d = 0.16$). There was no effect of prototype condition for those evaluating the pro-gender diversity supervisor: They scored the same in PPPA when in the balanced prototype condition ($M = 5.66$, $SE = 0.06$) and in the masculine prototype condition ($M = 5.67$, $SE = 0.07$, $p = .913$, $d = 0.01$).

Indirect Effects Predicted by the Full Theoretical Model

We next tested Hypothesis 2 by first regressing endorsement on PPPA controlling for the interactive manipulation effects.⁵ PPPA

was significantly and positively associated with endorsement in both studies (Study A: $B = 0.65$, $[0.60, 0.70]$, $p < .001$, $\eta_p^2 = 0.47$; Study B: $B = 0.63$, $[0.58, 0.67]$, $p < .001$, $\eta_p^2 = 0.51$). We then tested the indirect effects by running a mediated moderation path model using the bootmcat program (UCLA Statistical Consulting Group, 2022a, 2022b). We calculated 95% bias-corrected bootstrapped confidence intervals with 5,000 replications. Reported as Model 1 in Table 3, we observed significant indirect effects of our prototype manipulation on endorsement through PPPA in the sexist supervisor condition in both studies (Study A: $B = -0.26$, $[-0.44, -0.07]$; Study B: $B = -0.18$, $[-0.36, -0.01]$), supporting Hypothesis 2a. The indirect effects in the pro-gender diversity Captain condition were not significant in either study (Study A: $B = 0.07$, $[-0.06, 0.20]$; Study B: $B = -0.01$, $[-0.12, 0.10]$), so Hypothesis 2b was not supported.

We then tested the robustness of the indirect effects of PPPA by adding the likeability control variable and three parallel mediating mechanisms (see Model 2 in Table 3).⁶ In both studies, the indirect effects for the sexist Captain through PPPA remained significantly associated with endorsement (Study A: $B = -0.06$, $[-0.11, -0.02]$; Study B: $B = -0.05$, $[-0.10, -0.01]$). The only other mechanism that produced a significant indirect effect was perceived group prototypicality ($B = -0.03$, $[-0.06, -0.01]$ in the sexist supervisor condition and $B = 0.01$, $[0.00, 0.03]$ in the pro-gender diversity condition) but only in Study B. Post hoc tests indicated that PPPA

⁵ Although not hypothesized here, nor necessary for testing the indirect effect hypotheses, we also examined the total effects of the manipulations on endorsement. There is a marginally significant contrast of the endorsement of the sexist supervisor in the balanced versus masculine prototype condition in Study A, but this was not significant in Study B. Including the likeability control in our models, however, produces significant interaction coefficients in both Study A and Study B, with marginally significant contrasts for the sexist supervisors only. Full results are in Appendix F of the Supplemental Materials.

⁶ Although we found, in both studies, that general leader prototypicality (Study A: $B = 0.19$, $[0.12, 0.26]$, $p < .001$, $\eta_p^2 = 0.04$; Study B: $B = 0.16$, $[0.09, 0.22]$, $p < .001$, $\eta_p^2 = 0.03$) and group prototypicality (Study A: $B = 0.10$, $[0.03, 0.18]$, $p = .004$, $\eta_p^2 = 0.01$; Study B: $B = 0.10$, $[0.04, 0.16]$, $p = .002$; $\eta_p^2 = 0.01$) predicted endorsement, they were not consistently affected by the prototype and supervisor manipulations. In Study B, there was a significant interaction between our manipulations on group prototypicality ($B = 0.40$, $p < .001$, $\eta_p^2 = 0.01$), but this interaction was not significant in Study A ($B = 0.17$, $p = .159$, $\eta_p^2 < 0.01$). Perceived value congruence was not significantly associated with endorsement in either study.

Table 2
Study B Descriptives and Interitem Correlations

Variable	Supervisor endorsement	PPPA	Value congruence	Group prototypicality	Leader prototypicality	Supervisor likeability
α/r	.80	.94	.88	.88	.86	.95
Mean	5.02	5.11	4.29	5.46	5.27	4.81
SD	1.28	1.46	1.70	1.05	1.13	1.45
Skewness	-.69	-1.06	-.31	-.94	-.90	-.60
Supervisor endorsement	—					
PPPA	.75***	—				
Value congruence	.67***	.66***	—			
Group prototypicality	.63***	.63***	.51***	—		
Leader prototypicality	.72***	.69***	.63***	.68***	—	
Supervisor likeability	.81***	.71***	.73***	.60***	.71***	—

Note. PPPA = perceived professional prototype alignment. $N = 1,034$.
*** $p < .001$.

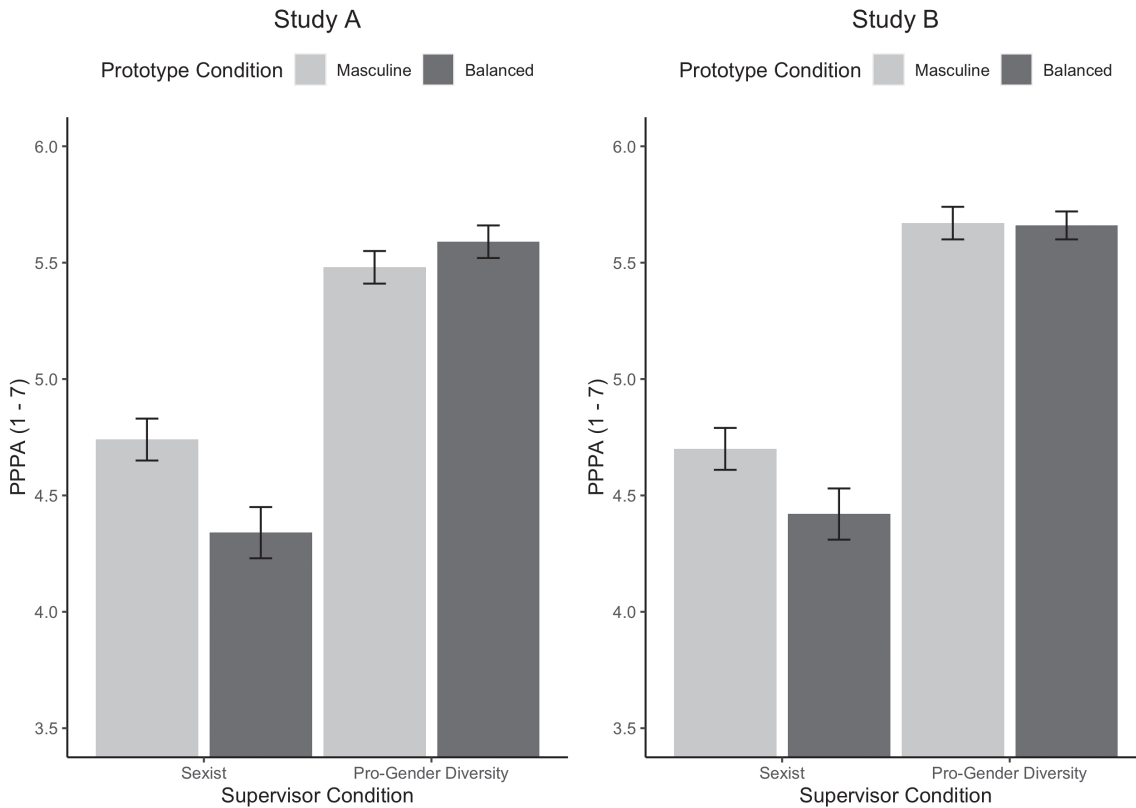
explained significant incremental variance in endorsement after accounting for the other mediators in both studies, Study A: $\chi^2(1) = 29.70, p < .001$; Study B: $\chi^2(1) = 67.61, p < .001$.

General Discussion

Across two studies (total $N = 1,879$), we found that encouraging subordinates to hold balanced (vs. masculine) professional

prototypes caused them to decrease their PPPA with sexist supervisors (Hypothesis 1a). Lower PPPA, in turn, led to decreased endorsement of sexist supervisors (Hypothesis 2a). This indirect effect held even when accounting for the simultaneous indirect effects through three alternative established mechanisms of supervisor endorsement (perceived value congruence, group prototypicality, and general leader prototypicality) and controlling for supervisor likeability. Together, these results contribute to scholarship on

Figure 2
Interaction Effects on Perceived Professional Prototype Alignment



Note. PPPA = perceived professional prototype alignment. Bars represent marginal effects of the interaction between prototype manipulation and supervisor manipulation on PPPA. Error bars represent standard errors.

Table 3
Indirect Effects With Bias-Corrected Bootstrapped 95% Confidence Intervals

Mediator variable and supervisor condition	Study A			Study B		
	IE	SE	95% CI	IE	SE	95% CI
Model 1						
PPPA						
Sexist sup.	-0.26	0.10	[-0.44, -0.07]	-0.18	0.09	[-0.36, -0.01]
Pro-gender diversity sup.	0.07	0.07	[-0.06, 0.20]	-0.01	0.06	[-0.12, 0.10]
Model 2						
PPPA						
Sexist sup.	-0.06	0.02	[-0.11, -0.02]	-0.05	0.02	[-0.10, -0.01]
Pro-gender diversity sup.	0.03	0.02	[-0.00, 0.06]	0.01	0.02	[-0.02, 0.05]
Value congruence						
Sexist sup.	-0.00	0.01	[-0.02, 0.01]	-0.00	0.00	[-0.01, 0.00]
Pro-gender diversity sup.	0.00	0.00	[-0.00, 0.01]	0.00	0.00	[-0.00, 0.01]
Group prototypicality						
Sexist sup.	-0.01	0.01	[-0.04, 0.00]	-0.03	0.01	[-0.06, -0.01]
Pro-gender diversity sup.	0.00	0.01	[-0.01, 0.03]	0.01	0.01	[0.00, 0.03]
Leader prototypicality						
Sexist sup.	-0.02	0.02	[-0.06, 0.01]	-0.02	0.01	[-0.04, 0.01]
Pro-gender diversity sup.	0.01	0.01	[-0.01, 0.05]	0.01	0.01	[-0.06, 0.04]

Note. IE = indirect effect; PPPA = perceived professional prototype alignment; CI = confidence interval; sup. = supervisor. Significant indirect effects (i.e., those whose bootstrapped 95% confidence intervals do not contain zero) are bolded; Study A: $N = 845$; Study B: $N = 1,034$.

reducing bias against women in organizations, showing that organizations can limit the endorsement of sexist supervisors by deliberately misaligning subordinates' perceptions of the similarity between their and their supervisors' beliefs about what it means to be a member of their profession.

This research also extends follower-centric theories of leadership (Uhl-Bien et al., 2014). Subordinates' PPPA with sexist supervisors is based on a prototype-to-prototype similarity assessment that is conceptually distinct from alternate mechanisms that are based on the perceived prototypicality of the supervisor (i.e., features-to-prototype comparisons). Furthermore, although scholars have long understood similarity to be a key element of followership (Engle & Lord, 1997; Liden et al., 1993), we provide further evidence that the basis of perceptions of similarity matters. PPPA is a particularly well-suited mechanism for shaping subordinates' perceived similarity with sexist supervisors because it is based on a malleable characteristic that is contextually relevant to subordinates' supervisor endorsement decisions. Thus, PPPA introduces a distinct cognitive comparison process to our understanding of followership decisions.

It is noteworthy that we did not observe a comparable increase in the endorsement of pro-gender diversity supervisors from subordinates in the balanced (vs. masculine) prototype condition (Hypotheses 1b and 2b). This may be attributable to ceiling effects among ratings of pro-gender diversity supervisors, noting that the pro-gender diversity supervisor was considered more likable than the sexist one in both studies (consistent with broad self-presentation concerns around diversity; Bell & Hartmann, 2007).⁷ These results suggest that manipulating PPPA may be a more effective tool for directing subordinate endorsements away from sexist supervisors than toward supervisors who already espouse more inclusive attitudes.

Limitations and Future Directions

Although our empirical studies were appropriate for theory testing, this approach leaves open many interesting questions that

are worthy of future research. For example, it will be important to test how our findings may generalize to other professional contexts, such as those where men are excluded due to feminine professional prototypes. Given research showing that group identification shapes the extent to which group prototypicality drives endorsement (Hogg et al., 1998; van Knippenberg & Hogg, 2003), it would also be interesting to examine if PPPA is affected in the same way. The fact that we observed effects in a sample likely low in professional identification suggests that strong identification is not essential for sensitivity to our manipulation. Although strong identification might amplify the effect (e.g., Hains et al., 1997), it could also make participants insensitive to our prototype manipulation, establishing a barrier to replicating these effects in the field. It will also be important for future research to ask how long the effects of a prototype balancing manipulation will last and explore what downstream consequences we can expect from reducing endorsement of sexist supervisors. Our hope, based on previous research (e.g., Haslam et al., 2011), is that the effects can reduce the risk of subordinates reproducing their sexist supervisor's biases. However, reducing supervisor endorsement risks increasing interpersonal conflict as well, interfering with team coordination, and potentially exposing subordinates to retribution. This is a serious concern, but one that organizations may be able to manage. By lending legitimacy to a balanced professional prototype and multiple venues of support, subordinates may feel empowered to engage in constructive resistance against sexist supervisors (Carsten & Uhl-Bien, 2013; Collinson, 2006). Efforts to scale up these processes should include procedures to mitigate the risks of subordinates being penalized for not endorsing sexist supervisors.

⁷ In both studies, the pro-gender diversity supervisor was rated significantly higher in likeability than the sexist supervisor. Study A: $M_{\text{sexist}} = 4.14$, $SD = 1.56$, $M_{\text{pro diversity}} = 5.20$, $SD = 1.15$, $p < .001$, $d = 0.77$. Study B: $M_{\text{sexist}} = 4.30$, $SD = 1.55$, $M_{\text{pro diversity}} = 5.33$, $SD = 1.11$, $p < .001$, $d = 0.76$.

Managerial Implications

This work shows how organizations may be able to prevent the propagation of masculine professional prototypes from sexist supervisors to their subordinates. Using explicit messaging (as we tested here), or the careful calibration of how organizations communicate what features are valued in their employees (e.g., in recruitment materials, evaluations, promotion decisions, etc.), organizations can encourage their subordinates to adopt more gender-balanced professional prototypes to reduce their PPPA with sexist supervisors. Translating our experimental manipulation into robust organizational interventions may help end the belief that there is such a thing as “a man’s job.”

References

- Barreto, N. B., & Hogg, M. A. (2017). Evaluation of and support for group prototypical leaders: A meta-analysis of twenty years of empirical research. *Social Influence, 12*(1), 41–55. <https://doi.org/10.1080/15534510.2017.1316771>
- Bartel, C. A., & Wiesenfeld, B. M. (2013). The social negotiation of group prototype ambiguity in dynamic organizational contexts. *Academy of Management Review, 38*(4), 503–524. <https://doi.org/10.5465/amr.2011.0300>
- Bell, J. M., & Hartmann, D. (2007). Diversity in everyday discourse: The cultural ambiguities and consequences of “happy talk.” *American Sociological Review, 72*(6), 895–914. <https://doi.org/10.1177/000312240707200603>
- Bendersky, C. (2018). Making US fire departments more diverse and inclusive. *Harvard Business Review*.
- Bouckenoghe, D., Zafar, A., & Raja, U. (2015). How ethical leadership shapes employees’ job performance: The mediating roles of goal congruence and psychological capital. *Journal of Business Ethics, 129*(2), 251–264. <https://doi.org/10.1007/s10551-014-2162-3>
- Bureau of Labor Statistics. (2020). *Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity*. Retrieved July 25, 2019, from <https://www.bls.gov/cps/cpsaat11.htm>
- Carsten, M. K., & Uhl-Bien, M. (2013). Ethical followership: An examination of followership beliefs and crimes of obedience. *Journal of Leadership & Organizational Studies, 20*(1), 49–61. <https://doi.org/10.1177/1548051812465890>
- Cheryan, S., & Markus, H. R. (2020). Masculine defaults: Identifying and mitigating hidden cultural biases. *Psychological Review, 127*(6), 1022–1052. <https://doi.org/10.1037/rev0000209>
- Chetkovich, C. A. (1997). *Real heat: Gender and race in the urban fire service*. Rutgers University Press.
- Colella, A., Hebl, M., & King, E. (2017). One hundred years of discrimination research in the Journal of Applied Psychology: A sobering synopsis. *Journal of Applied Psychology, 102*(3), 500–513. <https://doi.org/10.1037/apl0000084>
- Collinson, D. (2006). Rethinking followership: A post-structuralist analysis of follower identities. *The Leadership Quarterly, 17*(2), 179–189. <https://doi.org/10.1016/j.leaqua.2005.12.005>
- Cortina, L. M., & Berdahl, J. L. (2008). Sexual harassment in organizations: A decade of research in review. *Handbook of Organizational Behavior, 1*, 469–497. <https://doi.org/10.4135/9781849200448.n26>
- Danbold, F., & Bendersky, C. (2020). Balancing professional prototypes increases the valuation of women in male-dominated professions. *Organization Science, 31*(1), 119–140. <https://doi.org/10.1287/orsc.2019.1288>
- Dobbin, F., & Kalev, A. (2019). The promise and peril of sexual harassment programs. *Proceedings of the National Academy of Sciences of the United States of America, 116*(25), 12255–12260. <https://doi.org/10.1073/pnas.1818477116>
- Engle, E. M., & Lord, R. G. (1997). Implicit theories, self-schemas, and leader–member exchange. *Academy of Management Journal, 40*(4), 988–1010. <https://doi.org/10.2307/256956>
- Epitropaki, O., & Martin, R. (2004). Implicit leadership theories in applied settings: Factor structure, generalizability, and stability over time. *Journal of Applied Psychology, 89*(2), 293–310. <https://doi.org/10.1037/0021-9010.89.2.293>
- Hains, S. C., Hogg, M. A., & Duck, J. M. (1997). Self-categorization and leadership: Effects of group prototypicality and leader stereotypicality. *Personality and Social Psychology Bulletin, 23*(10), 1087–1099. <https://doi.org/10.1177/01461672972310009>
- Haslam, S. A., Reicher, S. D., & Platow, M. J. (2011). *The new psychology of leadership: Identity, influence and power*. Routledge.
- Hayibor, S., Agle, B. R., Sears, G. J., Sonnenfeld, J. A., & Ward, A. (2011). Value congruence and charismatic leadership in CEO–top manager relationships: An empirical investigation. *Journal of Business Ethics, 102*(2), 237–254. <https://doi.org/10.1007/s10551-011-0808-y>
- He, J., & Kang, S. (2021). Covering in cover letters: Gender and self-presentation in job applications. *Academy of Management Journal, 64*(4), 1097–1126. <https://doi.org/10.5465/amj.2018.1280>
- Heilman, M. E., & Caleo, S. (2018). Combatting gender discrimination: A lack of fit framework. *Group Processes & Intergroup Relations, 21*(5), 725–744. <https://doi.org/10.1177/1368430218761587>
- Hogg, M. A. (2001). A social identity theory of leadership. *Personality and Social Psychology Review, 5*(3), 184–200. https://doi.org/10.1207/S15327957PSPR0503_1
- Hogg, M. A. (2020). Learning who we are from our leaders: How leaders shape group and organizational norms and identities. In L. Argote & J. M. Levine (Eds.), *The Oxford handbook of group and organizational learning*. Oxford University Press.
- Hogg, M. A., Hains, S. C., & Mason, I. (1998). Identification and leadership in small groups: Salience, frame of reference, and leader stereotypicality effects on leader evaluations. *Journal of Personality and Social Psychology, 75*(5), 1248–1263. <https://doi.org/10.1037/0022-3514.75.5.1248>
- Johnson, S. K., Murphy, S. E., Zewdie, S., & Reichard, R. J. (2008). The strong, sensitive type: Effects of gender stereotypes and leadership prototypes on the evaluation of male and female leaders. *Organizational Behavior and Human Decision Processes, 106*(1), 39–60. <https://doi.org/10.1016/j.obhdp.2007.12.002>
- Joshi, A., Neely, B., Emrich, C., Griffiths, D., & George, G. (2015). Gender research in AMJ: An overview of five decades of empirical research and calls to action: Thematic issue on gender in management research. *Academy of Management Journal, 58*, 1459–1475. <https://doi.org/10.5465/amj.2015.4011>
- Kane, J. V., & Barabas, J. (2019). No harm in checking: Using factual manipulation checks to assess attentiveness in experiments. *American Journal of Political Science, 63*(1), 234–249. <https://doi.org/10.1111/ajps.12396>
- Kemelgor, B. H. (1982). Job satisfaction as mediated by the value congruity of supervisors and their subordinates. *Journal of Organizational Behavior, 3*(2), 147–160. <https://doi.org/10.1002/job.4030030202>
- Lane, S. P., Hennes, E., & Soderberg, C. K. (2018). *Power analysis simulation—dummy coding example*. <https://osf.io/6hswj/>
- Liden, R. C., Wayne, S. J., & Stilwell, D. (1993). A longitudinal study on the early development of leader–member exchanges. *Journal of Applied Psychology, 78*(4), 662–674. <https://doi.org/10.1037/0021-9010.78.4.662>
- Lim, T. S., & Loh, W. Y. (1996). A comparison of tests of equality of variances. *Computational Statistics & Data Analysis, 22*(3), 287–301. [https://doi.org/10.1016/0167-9473\(95\)00054-2](https://doi.org/10.1016/0167-9473(95)00054-2)
- 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*(3), 343–378. [https://doi.org/10.1016/0030-5073\(84\)90043-6](https://doi.org/10.1016/0030-5073(84)90043-6)
- Lord, R. G., Phillips, J. S., & Rush, M. C. (1980). Effects of sex and personality on perceptions of emergent leadership, influence, and social

- power. *Journal of Applied Psychology*, 65(2), 176–182. <https://doi.org/10.1037/0021-9010.65.2.176>
- Mummendey, A., & Wenzel, M. (1999). Social discrimination and tolerance in intergroup relations: Reactions to intergroup difference. *Personality and Social Psychology Review*, 3(2), 158–174. https://doi.org/10.1207/s15327957pspr0302_4
- Peer, E., Brandimarte, L., Samat, S., & Acquisti, A. (2017). Beyond the Turk: Alternative platforms for crowdsourcing behavioral research. *Journal of Experimental Social Psychology*, 70, 153–163. <https://doi.org/10.1016/j.jesp.2017.01.006>
- Platow, M. J., & van Knippenberg, D. (2001). A social identity analysis of leadership endorsement: The effects of leader ingroup prototypicality and distributive intergroup fairness. *Personality and Social Psychology Bulletin*, 27(11), 1508–1519. <https://doi.org/10.1177/01461672012711011>
- Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., Ramos, A., Verkasalo, M., Lönnqvist, J. E., Demirutku, K., Dirilen-Gumus, O., Konty, M., & Konty, M. (2012). Refining the theory of basic individual values. *Journal of Personality and Social Psychology*, 103(4), 663–688. <https://doi.org/10.1037/a0029393>
- Steffens, N. K., Munt, K. A., van Knippenberg, D., Platow, M. J., & Haslam, S. A. (2020). Advancing the social identity theory of leadership: A meta-analytic review of leader group prototypicality. *Organizational Psychology Review*, 11(1), 35–72. <https://doi.org/10.1177/2041386620962569>
- Stine, R. (1989). An introduction to bootstrap methods: Examples and ideas. *Sociological Methods & Research*, 18(2–3), 243–291. <https://doi.org/10.1177/0049124189018002003>
- Tumer, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Basil Blackwell.
- UCLA Statistical Consulting Group. (2022a). *How can I do moderated mediation with a categorical moderator in Stata?* <https://stats.oarc.ucla.edu/stata/faq/how-can-i-do-moderated-mediation-with-a-categorical-moderator-in-stata/>
- UCLA Statistical Consulting Group. (2022b). *How can I analyze multiple mediators in Stata?* <https://stats.idre.ucla.edu/stata/faq/how-can-i-analyze-multiple-mediators-in-stata/>
- Uhl-Bien, M., Riggio, R. E., Lowe, K. B., & Carsten, M. K. (2014). Followership theory: A review and research agenda. *The Leadership Quarterly*, 25(1), 83–104. <https://doi.org/10.1016/j.leaqua.2013.11.007>
- van Knippenberg, B., & van Knippenberg, D. (2005). Leader self-sacrifice and leadership effectiveness: The moderating role of leader prototypicality. *Journal of Applied Psychology*, 90(1), 25–37. <https://doi.org/10.1037/0021-9010.90.1.25>
- van Knippenberg, D. (2011). Embodying who we are: Leader group prototypicality and leadership effectiveness. *The Leadership Quarterly*, 22(6), 1078–1091. <https://doi.org/10.1016/j.leaqua.2011.09.004>
- van Knippenberg, D., & Hogg, M. A. (2003). A social identity model of leadership effectiveness in organizations. *Research in Organizational Behavior*, 25, 243–295. [https://doi.org/10.1016/S0191-3085\(03\)25006-1](https://doi.org/10.1016/S0191-3085(03)25006-1)
- Zhang, Z., Wang, M. O., & Shi, J. (2012). Leader-follower congruence in proactive personality and work outcomes: The mediating role of leader-member exchange. *Academy of Management Journal*, 55(1), 111–130. <https://doi.org/10.5465/amj.2009.0865>

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