Differential Support for Female Supervisors Among Men and Women
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Two studies evaluated the lay belief that women feel particularly negatively about other women in the workplace and particularly in supervisory roles. The authors tested the general proposition, derived from social identity theory (Tajfel & Turner, 1979, 2004), that women, compared to men, may be more supportive of other women in positions of authority, whereas men would respond more favorably to other men than to women in positions of authority. Consistent with predictions, data from an online experiment (n = 259), in which the authors randomly assigned men and women to evaluate identical female (vs. male) supervisors in a masculine industry, and a correlational study in the workplace using a Knowledge Networks sample (n = 198) converged to demonstrate a pattern of gender in-group favoritism. Specifically, in Study 1, female participants (vs. male participants) rated the female supervisor as higher status, were more likely to believe that a female supervisor had attained her supervisory position because of high competence, and viewed the female supervisor as warmer. Study 2 results replicated this pattern. Female employees (vs. male employees) rated their female supervisors as higher status and practiced both in-role and extra-role behaviors more often when their supervisor was female. In both studies, male respondents had a tendency to rate male supervisors more favorably than female supervisors, whereas female respondents tended to rate female supervisors more favorably than male supervisors. Thus, across both studies, the authors found a pattern consistent with gender in-group favoritism and inconsistent with lay beliefs that women respond negatively to women in authority positions.

Keywords: status, gender bias, organizational citizenship behavior, in-group favoritism

Supplemental materials: http://dx.doi.org/10.1037/apl0000258.supp

Historians have traced back the lay belief that women generally dislike each other more than a century (Piper, 2016), and this popular view persists today (Chandra, 2014; Hoogervorst, 2014; Sanchez, 2012). Mainstream media often portray women as unsupportive of each other at work (Akbari, 2015; Khazan, 2014; Lepore, 2014; Rezvani, 2012). For instance, a Marie Claire reporter asserted that women at work have a “dirty little secret: they can’t stand each other” (Bryan, 2008). Even organizational behavior researchers have treated workplace competition among women as an anomaly that must be explained, but have largely ignored competition among men (Mavin, 2008). For example, since the 1970s, senior professional women who do not support junior women are negatively labeled “queen bees” (Derks, Van Laar, & Ellemers, 2016; Staines, Travis, & Jayerante, 1973), whereas there is no special term—nor a corresponding program of research—for senior men who are unsupportive of their junior male colleagues.

People view conflict between two women at work as more problematic than identical conflict between two men or between a woman and a man (Sheppard & Aquino, 2013). Thus, instances of female–female conflict in the workplace are likely to be highly salient (Tversky & Kahneman, 1973) and to be perceived as more common than they actually are, suggesting

Due to women’s latent antipathy for one another, trivial events give rise to fierce hatreds; and due to women’s irascibility, these occasions lead quickly to insolence and assaults.

— Cesare Lombroso (1893)
that the purportedly high prevalence of workplace discord among women may be exaggerated (Mavin, 2008; Sheppard & Aquino, 2017). The belief that there are inherent conflicts between female subordinates and their female supervisors could be seen as justification for women’s slow advancement up the managerial ladder, letting organizations off the hook from having to take action to remedy such issues.

Beyond lay beliefs, research that could help answer whether women actually “hate working for other women” (Bryan, 2008; p. 1) has found mixed results. Many past investigations on attitudes toward women in authority roles have failed to find participant gender differences (Brescoll, 2011; Brescoll, Dawson, & Uhlmann, 2010; Heilman, Wallen, Fuchs, & Tamkins, 2004; Johnson, Murphy, Zewdie, & Reichard, 2008; Rudman, Moss-Racusin, Phelan, & Nauts, 2012). A few have found that men reacted more negatively to female leaders than women (e.g., Ayma, Korabik, & Morris, 2009; Tomkiewicz & Adeyemi-Bello, 1995). And yet others found the opposite (e.g., Parks-Stamm, Heilman, & Hearns, 2008). These inconclusive findings might reflect that most past studies had other primary focal hypotheses, such as comparing attitudes toward female targets with different styles or presentations (e.g., more communal vs. more agentic), and the analysis of participant gender has often been secondary.

In addition, these studies relied heavily on college student samples and typically focused on hypothetical targets exclusively. Given that prolonged (vs. brief) exposure to an individual can reduce people’s tendency to rely on stereotypes (Fiske, 1998), the results of laboratory studies may not generalize to real-life work relations. A few surveys, however, have examined real employees and supervisors in work settings and either found no gender differences in employee attitudes toward female supervisors (e.g., Byron, 2007) or found a mixed pattern of results (e.g., Elsesser & Lever, 2011; Kwon & Milgrom, 2010). Although more ecologically valid, these studies are nonetheless limited in that they either have only examined a single organization (e.g., Kwon & Milgrom, 2010) or used online convenience samples (e.g., Elsesser & Lever, 2011).

In the present research, we addressed the question of gender differences in attitudes toward women in authority roles directly through a complementary methodological approach including (a) a straightforward experimental test of participant gender effects on perceptions of male and female supervisors’ status, competence, and warmth (Study 1), and (b) archival data analyses (Study 2) comparing perceptions of supervisor status as well as work behaviors among adult employees drawn randomly from a nationally representative panel (Knowledge Networks, 2013). To our knowledge, this is the first study to examine the question of gender differences in bias against female supervisors based on such a sample, and the first investigation to test whether male and female employees behave differently depending on the gender of their supervisor.

There is a strong tendency to favor members of one’s own social groups over members of other groups (Greenwald & Pettigrew, 2014; Tajfel, Billig, Bundy, & Flament, 1971), and social identity theory (Tajfel & Turner, 1979, 2004) suggests that people might prefer authority figures with whom they share a social category group membership over those with whom they do not. However, in-group favoritism tends to be stronger among members of high status social groups (such as men) relative to low status groups (such as women; Bettencourt, Dorr, Charlton, & Hume, 2001; Jost & Banaji, 1994). Therefore, men might show a stronger preference for gender in-group supervisors relative to women, such that men’s preference for male (vs. female) supervisors might be more pronounced than women’s preference for female (vs. male) supervisors. This asymmetry (i.e., women’s slight preference in one direction coupled with men’s stronger preference in the opposite direction) could lead to a significant gap between men and women’s attitudes toward female supervisors, but little or no gap in attitudes toward male supervisors. Thus, women may value, respect, and admire female supervisors more so than men (i.e., compared to men, women may view female supervisors as higher status; Blader & Chen, 2014; Djurdjevic et al., 2017). In contrast, we would expect little or no respondent gender differences in perceptions of male supervisors’ status.

Hypothesis 1: Respondent gender and supervisor gender will interact, such that female respondents will view female supervisors as higher status than will male respondents, but for male supervisors the effect associated with respondent gender will be less pronounced.

In Study 1, we also examined judgments of supervisors’ competence and warmth, two fundamental dimensions of social perception closely linked to status attributions (Fiske, Cuddy, & Glick, 2007; Fiske, Cuddy, Glick, & Xu, 2002). Whereas out-groups are often judged as competent-but-cold or warm-but-incompetent, in-groups tend to be seen as both competent and warm (Fiske et al., 2007; Fiske, Cuddy, Glick et al., 2002; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005), and as a result they elicit respect and admiration, that is, are viewed as high status (Cuddy, Fiske, & Glick, 2008; Fiske, Cuddy, & Glick, 2002). Perceptions of competence are an important antecedent to feelings of respect (Hollander, 1985; Magee & Galinsky, 2008), and people view high-status (vs. low-status) authorities as warmer (Fragale, Overbeck, & Neale, 2011). Thus, we would expect women compared to men to see female supervisors as more competent and warmer. In contrast, much in the same way as status, we would not expect to see participant gender differences in ratings of male supervisors.

Hypotheses 2–3: Participant gender and supervisor gender will interact, such that, compared to male participants, female participants will view female supervisors as more competent (H2), and warmer (H3), whereas for male supervisors the participant gender difference will be less pronounced.

Hypothesis 1 has important practical implications and potential downstream consequences for female supervisors. Subordinates who respect and admire their superiors also tend to view them as highly deserving of their authority—that is, more legitimate (Blader & Chen, 2014; Magee & Galinsky, 2008), and they feel like they ought to comply with the decisions and directions of those superiors (Levi, Sacks, & Tyler, 2009; Tyler, 2002). Given that people tend to comply and cooperate with authorities they perceive as legitimate (but resist authorities they view as illegitimate; Tyler, 2010), if women compared to men view female supervisors as higher status, it follows that women (vs. men) may be more supportive of female supervisors while men might be more resistant to female supervisors. We examined employee
resistance in Study 2 by investigating the extent to which male and female employees met their basic job requirements and expectations (i.e., “in-role” behavior) when the supervisor was female (vs. male), and the extent to which employees went above and beyond those basic job requirements and engaged in discretionary cooperative work behaviors, or “extra-role” behaviors (i.e., organizational citizenship). Extra-role behaviors foster group cohesion, productivity, and efficiency, and can be crucial for overall organizational success (Podsakoff, Ahearne, & MacKenzie, 1997; Podsakoff, Whiting, Podsakoff, & Blume, 2009). If women compared to men view female supervisors as higher status, then it follows that women may also practice in-role and extra-role behaviors more frequently than men when the supervisor is a woman. In contrast, as we expected men and women to see male supervisors as similarly high status, we did not expect to find employee gender differences in behavior when the supervisor was male.

Hypotheses 4–5: Employee gender and supervisor gender will interact, such that, compared to male employees, female employees will enact in-role behavior (H4) and extra-role behavior (H5) more frequently when the supervisor is a woman whereas for male supervisors the employee gender difference will be less pronounced.

Thus, Study 2 went beyond measuring attitudes toward supervisors by also investigating whether employees behaved differently depending on supervisor gender. This is an important contribution, as prior research on bias against female leaders has focused almost exclusively on the outcomes of this bias for women leaders themselves (e.g., salary, promotions; e.g., Brescoll & Uhlmann, 2008), ignoring the larger organizational context in which this prejudice is situated. Moreover, we examined employee behavior both from employees’ own perspective as well as their supervisors’, providing a more accurate and reliable assessment than would be possible by focusing exclusively on employee self-reports (Berry, Carpenter, & Barratt, 2012; Goffin & Gellatly, 2001; Podsakoff & Organ, 1986).

Finally, whereas Hypotheses 1–5 focus on how women (vs. men) might be more supportive of female supervisors, these predictions rest on the idea that both women and men might prefer men) might be more supportive of female supervisors, these predictions, given that bias against female leaders tends to be stronger in more stereotypically masculine fields (e.g., finance) relative to more neutral or feminine fields like education (Eagly, Karau, & Makhijani, 1995; Heilman et al., 2004).

Study 1

We tested Hypotheses 1–3 and 6 by randomly assigning men and women to evaluate identical hypothetical male or female supervisors in a financial services company. We purposely set our investigation in a masculine field as a conservative test of our predictions, given that bias against female leaders tends to be stronger in more stereotypically masculine fields (e.g., finance) relative to more neutral or feminine fields like education (Eagly, Karau, & Makhijani, 1995; Heilman et al., 2004).

Method

Participants and procedure. We enrolled 259 participants on Amazon Mechanical Turk (mean age = 31.80, SD = 10.11; 50.6% female; 75.3% White). See the online supplementary materials for additional details and measures. Procedures were approved by the Institutional Review Board at Yale University. Participants first read the mission statement of a financial services company (developed for this study, see Appendix A). They then read information about a person ("X") in a high-power supervisory role in this company (see Fragale et al., 2011). We conveyed supervisor gender with suffixes and pronouns. Then, we measured perceptions of supervisor status with seven items (e.g., “Admire and look up to X;” Cronbach’s α = .94); supervisor competence with three items (e.g., “Was highly competent and capable;” α = .89); and supervisor warmth with eight trait ratings (e.g., “cordial;” α = .85).

Results and Discussion

We conducted a multivariate analysis of variance with participant and supervisor gender predicting ratings of supervisor status, competence, and warmth. The predicted significant interactions between participant gender and supervisor gender emerged for all three outcomes and are reported in Table 1 along with the main effects. Consistent with Hypotheses 1–3, women versus men viewed the female supervisor as significantly higher status (M = 7.34, SE = .17 vs. M = 6.65, SE = .17), F(1, 255) = 8.02, p = .005, τp² = .031, 95% confidence interval (CI) [.210, 1.17]; significantly more likely to have attained her position due to competence (M = 5.27, SE = .10 vs. M = 4.78, SE = .10), F(1, 255) = 11.81, p = .001, τp² = .044, 95% CI [.213, .784]; and significantly warmer (M = 3.99, SE = .08 vs. M = 3.59, SE = .08), F(1, 255) = 11.81, p = .001, τp² = .044, 95% CI [.213, .784]; and significantly warmer.

Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Perceptions of supervisor status (1–10)</th>
<th>Perceptions of supervisor competence (1–6)</th>
<th>Perceptions of supervisor warmth (1–5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F(1, 255) =</td>
<td>F(1, 255) =</td>
<td>F(1, 255) =</td>
</tr>
<tr>
<td>Participant gender (PG)</td>
<td>3.23, p = .073, τp² = .013</td>
<td>8.71, p = .003, τp² = .033</td>
<td>6.44, p = .012, τp² = .025</td>
</tr>
<tr>
<td>Supervisor gender (SG)</td>
<td>.61, p = .435, τp² = .002</td>
<td>.60, p = .441, τp² = .002</td>
<td>.03, p = .865, τp² &lt; .001</td>
</tr>
<tr>
<td>PG × SG</td>
<td>4.99, p = .026, τp² = .019</td>
<td>3.75, p = .054, τp² = .015</td>
<td>5.72, p = .017, τp² = .022</td>
</tr>
</tbody>
</table>
255) = 12.01, \( p = .001, \eta^2_p = .045, 95\% \text{ CI} [.173, .627] \). For male supervisors, women and men did not differ significantly on ratings of status (\( M = 7.09, SE = .17 \) vs. \( M = 7.17, SE = .17 \)), \( F(1, 255) = .10, p = .757, \eta^2_p < .001 \); competence (\( M = 5.15, SE = .10 \) vs. \( M = 5.05, SE = .10 \)), \( F(1, 255) = .52, p = .472, \eta^2_p = .002 \), or warmth (\( M = 3.78, SE = .08 \) vs. \( M = 3.77, SE = .08 \)), \( F(1, 255) = .01, p = .918, \eta^2_p < .001 \). See Figure 1. In addition, although women rated male and female supervisors as similarly competent, men viewed male and female supervisors as similarly warm, high status, although women rated male and female supervisors as similarly warm (Fragale et al., 2011), participant gender differences in status attributions for the female supervisor significantly mediated the indirect effect of participant gender on perceptions of supervisor status as well as work behaviors among adult employees in a variety of companies matched with their real, ongoing supervisors. This is the first study that we know of to examine gender differences in attitudes toward female supervisors based on such a sample, and to examine if employee work behaviors vary depending on employee and supervisor gender.

### Method

**Participants and procedure.** We analyzed data from 200 adult employees (50% female; mean age = 45.43, SD = 9.85) and their supervisors (47.5% female; mean age = 46.48, SD = 8.36). Gender information was missing for two supervisors. In total, 71 men and 33 women worked for male supervisors, and 28 men and 66 women worked for female supervisors. Employees were originally randomly sampled in 2002 from a nationally representative panel of 55,000 adults (Knowledge Networks, 2013) by Blader and Tyler (2009).

Procedures were approved by the Institutional Review Board at New York University. As predicted, supporting Hypotheses 1–3, women (vs. men) rated female supervisors as higher status, were more likely than men to believe that a female supervisor in a financial services company had attained her supervisory role due to high competence, and viewed the female supervisor as warmer. \( F(1, 255) = 3.63, p = .058, \eta^2_p = .014, 95\% \text{ CI} [.009, .562] \).

As predicted, supporting Hypotheses 4–6, women (vs. men) rated female supervisors as more competent (\( M_w = .28, SE = .14 \)), \( F(1, 255) = 3.63, p = .058, \eta^2_p = .014, 95\% \text{ CI} [.009, .562] \).

### Study 2

In this study, we tested Hypotheses 1 and 4–6 by comparing perceptions of supervisor status as well as work behaviors among adult employees in a variety of companies matched with their real, ongoing supervisors. This is the first study that we know of to examine gender differences in attitudes toward female supervisors based on such a sample, and to examine if employee work behaviors vary depending on employee and supervisor gender.

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In line with the proposition that perceptions of competence often antecede status attributions (Hollander, 1985; Magee & Galinsky, 2008), participant gender differences in perceptions of the female supervisors’ competence significantly mediated the indirect effect of participant gender on perceptions of supervisor status for female supervisors, \( b = .43, SE = .15, 95\% \text{ CI} [.182, .775] \). And, consistent with past work showing that high (vs. low) status authority figures are viewed as warmer (Fragale et al., 2011), participant gender differences in status attributions for the female supervisor significantly mediated the indirect effect of participant gender on ratings of the female supervisor’s warmth, \( b = .18, SE = .07, 95\% \text{ CI} [.055, .336] \). For male supervisors, these mediations were not significant. Mediation analyses are reported in full in the online supplementary materials.

1 Blader and Tyler (2009, Study 2) randomly selected 4,430 people from the panel maintained by Knowledge Networks, which is composed of about 55,000 people. From the 4,430 individuals surveyed, 2,020 were willing to invite their supervisor to participate in the study, and out of those, 831 supervisors agreed to participate (Blader & Tyler, 2009; Study 2). Here, we present data on 200 employee–supervisor pairs (out of the original subsample of 831 pairs) that agreed to take part in a longer study.

2 In line with the proposition that perceptions of competence often antecede status attributions (Hollander, 1985; Magee & Galinsky, 2008), participant gender differences in perceptions of the female supervisors’ competence significantly mediated the indirect effect of participant gender on perceptions of supervisor status for female supervisors, \( b = .43, SE = .15, 95\% \text{ CI} [.182, .775] \). And, consistent with past work showing that high (vs. low) status authority figures are viewed as warmer (Fragale et al., 2011), participant gender differences in status attributions for the female supervisor significantly mediated the indirect effect of participant gender on ratings of the female supervisor’s warmth, \( b = .18, SE = .07, 95\% \text{ CI} [.055, .336] \). For male supervisors, these mediations were not significant. Mediation analyses are reported in full in the online supplementary materials.

**Figure 1.** Interaction effects between participant and supervisor gender on participant perceptions of supervisor status (A), competence (B), and warmth (C) in Study 1. Error bars represent the standard error of the mean.
York University. Potential participants were screened to ensure that they were at the same job for at least 3 months; worked 20 hours a week or more; had a primary supervisor; and agreed to have their supervisor contacted about completing a confidential questionnaire. Participants were contacted via random digit dialing, and their surveys were conducted over WebTV. Both employees and supervisors were offered financial incentives for each completed supervisor questionnaire (about 41%). Specific industry or field information was not available, but employee-supervisor pairs came from a variety of company types and sizes: 29.9% worked for small businesses; 19.8% worked for large companies in one location; 39.6% of employees worked for multicity American companies; and 10.7% worked for multinational companies. See the online supplementary materials for additional details, measures, and analyses not included in this report.

**Measures.** The employee survey contained all measures described here, whereas the supervisor survey included only the behavior measures. See Appendix B.

**Perceptions of supervisor status.** Employees rated six items developed for this investigation (e.g., “I think that my supervisor is a good leader,” α = .95), which were averaged to form a measure of perceptions of supervisor status. A principal components analysis (Varimax rotation) revealed a single factor for this measure with eigenvalue = 4.81 (80.18% of variance; loadings from .79 to .94). We confirmed the single factor structure in a separate sample (n = 118), which provided evidence for the psychometric soundness of the measure (see the online supplementary materials). In sum, scores on our measure of perceptions of supervisor status converged with theoretically relevant measures such as commitment to supervisors (Stinglhamber, Benten, & Vandenberghe, 2002; Vandenberghe, Benten, & Stinglhamber, 2004) and quality of leader–member exchange (Graen & Cashman, 1975; Graen, Novak, & Sommerkamp, 1982; Graen & Scandura, 1987). The separate validation study showed that perceptions of supervisor status were just as useful as these well-established measures in predicting relevant constructs such as organizational commitment (Greguras & Ford, 2006; Liden & Maslyn, 1998; Maslyn & Uhl-Bien, 2001) and turnover intentions (Liden & Maslyn, 1998; Vandenberghe & Benten, 2009; Vandenberghe, Benten, & Panaccio, 2017). In contrast, as expected, perceptions of supervisor status were weakly associated with how satisfied participants were with coworkers (Liden & Maslyn, 1998; Vandenberghe et al., 2004).

**Employee in-role and extra-role behavior.** We examined both in-role and extra-role work behaviors from the perspective of employees as well as from the perspective of their supervisors, in an effort to provide more reliable estimates of actual employee behavior (see Berry et al., 2012; Goffin & Gelfatly, 2001; Podsakoff & Organ, 1986). Employees self-reported how often they met their job requirements (i.e., in-role behavior) by rating five items (e.g., “Follow the directives of your supervisor,” α = .92; Tyler, 2010; similar items appear in Tyler & Blader, 2000, 2001). Supervisors rated employees on the same five items (treated as a separate measure; α = .78). Finally, employees self-reported how often they engaged in 6 extra-role behaviors (e.g., “Volunteer to help orient new employees,” α = .80; Blader & Tyler, 2009; Tyler, 2010), and supervisors rated employees on the same 6 items (treated as a separate measure; α = .90).

**Control variables.** As seen in Table 2, male and female supervisors did not differ in terms of age; education; number of supervisees; length of the supervisory relationship; employee age; or employee education. However, there was an overall difference in company type, χ²(9) = 17.00, p = .049, φ = .29, such that female–female pairs were more likely than male–male pairs to work in small businesses (40.9% vs. 22.5%), p = .044, whereas male–male pairs were more likely than female–female pairs to work in multinational locations (18.3% vs. 1.5%), p = .001.

### Table 2

**Comparisons Between Male and Female Supervisors on Control Variables in Study 2**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Male</th>
<th>Female</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor age</td>
<td>46.61</td>
<td>46.31</td>
<td>196</td>
<td>2.5</td>
<td>.017</td>
</tr>
<tr>
<td>Supervisor education</td>
<td>5.38</td>
<td>5.02</td>
<td>195</td>
<td>1.51</td>
<td>.133</td>
</tr>
<tr>
<td>Number of supervisees</td>
<td>30.66</td>
<td>22.85</td>
<td>30.30</td>
<td>194</td>
<td>1.39</td>
</tr>
<tr>
<td>Length of supervisory relation (years)</td>
<td>4.23</td>
<td>.87</td>
<td>4.17</td>
<td>.76</td>
<td>194</td>
</tr>
<tr>
<td>Employee age</td>
<td>44.75</td>
<td>46.36</td>
<td>10.3</td>
<td>1.16</td>
<td>.253</td>
</tr>
<tr>
<td>Employee education</td>
<td>4.73</td>
<td>4.59</td>
<td>1.35</td>
<td>196</td>
<td>.72</td>
</tr>
</tbody>
</table>

*a Supervisor and employee education variables were coded as follows: 1 = less than high school (HS); 2 = HS/GED; 3 = Some college; 4 = Associate’s degree; 5 = Bachelor’s degree; 6 = Master’s degree; 7 = professional degree; 8 = doctorate degree.

### Results and Discussion

See Table 3 for means, standard deviations, and bivariate correlations.

**Perceptions of supervisor status.** Employee perceptions of supervisor status were analyzed with a 2 (supervisor gender) × 2 (employee gender) analysis of variance. As expected, there was a significant interaction between supervisor and employee gender on employee perceptions of supervisor status, whether control variables were included or omitted (see Table 4 for the interaction and main effects). We report simple effects without adjustments. Supporting Hypothesis 1, female employees viewed female supervisors as significantly higher status compared to male employees, F(1, 194) = 10.17, p = .002, η²p = .050, MDS = .77, SE = .24, 95% CI [.295, 1.25]. But male and female employees rated male supervisors similarly (MDS = .13, SE = .23), F(1, 194) = .33, p = .566, η²p = .002, 95% CI [−.316, .577]. See Figure 2. Further, consistent with Hypothesis 6, female employees viewed female supervisors as marginally higher status (vs. male supervisors), F(1, 194) = 3.34, p = .069, η²p = .017, MDS = .42, SE = .23, 95% CI [−.033, .871], whereas male employees viewed male supervisors as significantly higher status (vs. female supervisors), F(1, 194) = 4.08, p = .045, η²p = .021, MDS = .48, SE = .24, 95% CI [.011, .958].

### Notes

1. Knowledge Networks asked employees to provide contact information for their supervisor. Knowledge Networks then contacted the supervisor, and each supervisor was compensated directly by Knowledge Networks. This setup made it extremely difficult for employees to cheat (i.e., complete the supervisor survey as a way to earn extra reward).

2. Details and results from exploratory factor analyses for all three measures in Study 2 are reported in the online supplementary materials.
Employee in-role and extra-role behavior. For the two behavior measures, we conducted two separate mixed model analyses with employee gender and supervisor gender as between-participants factors, including employee self-reports as well as supervisor reports simultaneously. This analytic strategy takes into account the potential covariation of employee and supervisor reports, providing more reliable estimates (e.g., Berry et al., 2012). As predicted, there were significant interactions between supervisor and employee gender for both in-role and extra-role behavior, whether control variables were included or omitted (see Table 4 for the interactions and main effects). We report simple effects without adjustments. Consistent with Hypotheses 4 and 5, female (vs. male) employees working for a female supervisor were significantly more likely to practice in-role behavior, $F(1, 192) = 14.41, p < .001, \eta_p^2 = .070, M_{D} = .44, SE = .12, 95\% CI [.211, .668]$, and to engage in extra-role behavior, $F(1, 193) = 12.54, p < .001, \eta_p^2 = .061, M_{D} = .71, SE = .20, 95\% CI [.315, 1.108]$. In contrast, there were no employee gender differences for male supervisors for in-role behavior, $F(1, 192) = .99, p = .319, \eta_p^2 = .005$, or extra-role behavior, $F(1, 193) = .46, p = .497, \eta_p^2 = .002$. See Figure 2. Finally, in support of Hypothesis 6, female employees enacted in-role behavior significantly more often with female (vs. male) supervisors ($M_D = .26, SE = .12$), $F(1, 192) = 6.05, p = .015, \eta_p^2 = .031, 95\% CI [.052, .472]$, and engaged in extra-role behavior marginally more often, $F(1, 193) = 3.78, p = .053, \eta_p^2 = .019, M_D = .37, SE = .19, 95\% CI [-.005, .745]$. Similarly, male employees enacted in-role behaviors significantly more often with male (vs. female) supervisors ($M_D = .28, SE = .11$), $F(1, 192) = 6.07, p = .015, \eta_p^2 = .031, 95\% CI [.056, .508]$, and also engaged in extra-role behavior significantly more often ($M_D = .47, SE = .20$), $F(1, 193) = 5.60, p = .019, \eta_p^2 = .028, 95\% CI [.078, .861]$.

As expected, Study 2 results largely converged with Study 1 to reveal that, compared to men, women were generally more supportive of female supervisors. We replicated Study 1 results regarding perceptions of supervisor status in a more generalizable sample, and we also extended Study 1 by comparing work behaviors in male and female employees working for male and female supervisors. As predicted, women engaged in more positive work behaviors than men (both in-role and extra-role) when working for a female supervisor. And, similar to Study 1, Study 2 provided evidence in line with gender in-group favoritism, as ratings were more positive in same-gender (vs. other-gender) pairs across measures, particularly for male employees.

General Discussion

As expected, experimental (Study 1) and correlational (Study 2) data converged to show that women (vs. men) viewed female supervisors as higher status. In Study 1 we also found, as predicted, that women (vs. men) rated a hypothetical female supervisor more positively on two fundamental dimensions of social cognition—competence and warmth (Fiske et al., 2007). Study 2 complemented and extended these findings by revealing that female employees versus male employees engaged in more positive behaviors when working for a woman, meeting basic job requirements more often, and going above and beyond those requirements more frequently than male employees when working for a female supervisor. Further, across measures, men had a stronger preference for gender in-group (vs. out-group) supervisors relative to women, in line with past work showing that in-group bias tends to be stronger in high status (vs. low status) groups (Bettencourt et al., 2001). As predicted, women’s slight preference for female supervisors coupled with men’s stronger preference for male supervisors.

Table 4

Results for All Variables in Study 2. Both Without Covariates, and Adjusting for Company Type, Length of Supervisory Relationship, Number of Supervisors, Supervisory Education, Employee Education, Supervisor Age, and Employee Age

<table>
<thead>
<tr>
<th>Variable</th>
<th>Employee perceptions of supervisor status (1–5)</th>
<th>Employee in-role behavior (1–7)</th>
<th>Employee extra-role behavior (1–7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without covariates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee gender (EG)</td>
<td>$F(1, 194) = 3.76, p = .054, \eta_p^2 = .019$</td>
<td>$F(1, 192) = 4.56, p = .034, \eta_p^2 = .023$</td>
<td>$F(1, 193) = 4.52, p = .035, \eta_p^2 = .023$</td>
</tr>
<tr>
<td>Supervisor gender (SG)</td>
<td>$F(1, 194) = .04, p = .844, \eta_p^2 &lt; .001$</td>
<td>$F(1, 192) = .017, p = .897, \eta_p^2 &lt; .001$</td>
<td>$F(1, 193) = .13, p = .717, \eta_p^2 &lt; .001$</td>
</tr>
<tr>
<td>EG × SG</td>
<td>$F(1, 194) = 7.42, p = .007, \eta_p^2 = .037$</td>
<td>$F(1, 192) = 12.11, p = .001, \eta_p^2 = .059$</td>
<td>$F(1, 193) = 9.33, p = .003, \eta_p^2 = .046$</td>
</tr>
<tr>
<td>With covariates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EG</td>
<td>$F(1, 183) = 2.36, p = .126, \eta_p^2 = .013$</td>
<td>$F(1, 182) = 5.43, p = .021, \eta_p^2 = .029$</td>
<td>$F(1, 182) = 2.46, p = .118, \eta_p^2 = .013$</td>
</tr>
<tr>
<td>SG</td>
<td>$F(1, 183) = 14, p = .007, \eta_p^2 &lt; .001$</td>
<td>$F(1, 182) = .004, p = .948, \eta_p^2 &lt; .001$</td>
<td>$F(1, 182) = .30, p = .586, \eta_p^2 = .002$</td>
</tr>
<tr>
<td>EG × SG</td>
<td>$F(1, 183) = 5.93, p = .016, \eta_p^2 = .031$</td>
<td>$F(1, 182) = 15.16, p &lt; .001, \eta_p^2 = .077$</td>
<td>$F(1, 182) = 11.81, p = .001, \eta_p^2 = .061$</td>
</tr>
</tbody>
</table>
Pervisors led to a respondent gender gap in ratings of female supervisors, and no gender difference for male supervisors. These findings are consistent with social identity theory and dovetail past research on in-group favoritism (Dasgupta, 2004; Greenwald & Pettigrew, 2014; Tajfel & Turner, 1979, 2004). They also challenge the popular (but problematic) belief that women are unsupportive of female supervisors (Bryan, 2008; Schupak, 2012). Instead, the studies reported here suggest that women are generally supportive of female leaders. However, our findings do not preclude the possibility that, although discrimination in the United States is illegal, individuals making hiring decisions could feel justified not to place a woman in a supervisory role based on the belief that male employees would resist a female supervisor—a belief that is not inconsistent with our findings. Compared to women, men showed consistently lower acceptance of female supervisors, and many times this gap was driven by male respondents’ preference for a male (vs. female) supervisor. In Study 1, men randomly assigned to evaluate a female (vs. male) supervisor viewed the female supervisor as marginally less competent and as deserving significantly lower status. Thus, a female leader in charge of an all-male work unit may be at a significant disadvantage.

Further, although female respondents were consistently more supportive of female supervisors compared to male respondents, in-group favoritism was weaker among women (vs. men), and our findings cannot rule out the possibility that, under certain circumstances, women may withdraw their support for female supervisors, and exhibit attitudes and behaviors indistinguishable from men’s. For example, given that people often derogate in-group members who deviate from prescriptive group norms and behaviors (Pinto, Marques, Levine, & Abrams, 2010; Rullo, Presaghi, & Livi, 2015) women might resist female supervisors who adopt masculine management styles or who behave in explicitly dominant ways (Williams & Tiedens, 2016), as these behaviors are proscribed for women (Prentice & Carranza, 2002). Future research should examine if perceptions of supervisors’ masculinity impact women’s support for female supervisors more strongly than it does for men (e.g., Kark, Waismel-Manor, & Shamir, 2012).

Our findings are in line with evidence that women (vs. men) tend to harbor more positive implicit and explicit attitudes toward female authority (Richeson & Ambady, 2001; Rudman & Kilanski, 2000; see also Koch, D’Mello, & Sackett, 2015). However, past experiments have often failed to find participant gender differences in attitudes toward female leaders (e.g., Brescoll, 2011; Heilman et al., 2004; Rudman et al., 2012). It is possible that the nature of the work context or the specific responses tested (e.g., compensation and promotion vs. behaviors representing the employee-supervisor relationship) may play a critical moderating role. Further, whereas many past investigations have focused exclusively on hypothetical targets, raising generalizability questions, we contribute evidence that respondent gender can moderate attitudes toward female supervisors both in minimal experimental paradigms (Study 1) as well as in ongoing supervisory relationships (Study 2).

Similarly, this is the first investigation that we know of to examine whether male and female employees behave differently depending on the gender of their supervisor, making an important contribution to various literatures and supporting the view that gender bias can have far-reaching consequences in organizational contexts, as we recently proposed (Vial, Napier, & Brescoll, 2016). However, one limitation is that we only examined employee behavior based on correlational data. Additional experimental work is necessary to establish whether the behavioral differences that we observed in Study 2 were due specifically to employee/supervisor gender. Further, although the patterns of employee behavior were consistent with predictions, employee self-reports and supervisor reports of employee behavior may be biased in different ways. For example, employees might overreport positive work behaviors, and both employee and supervisor recall may be influenced by

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Figure 2. Interaction effects between employee and supervisor gender on employee perceptions of supervisor status (A), employee in-role behavior (B), and employee extrarole behavior (C) in Study 2. Error bars represent the standard error of the mean.
gender stereotypes (e.g., expectations that women help more than men; Farrell & Finkelstein, 2007; Heilman & Chen, 2005). One important next step is to examine more objective measures of employee behavior (e.g., experience-based sampling). Study 2 may also be limited by the lack of industry information, as men and women are distributed differently across industries, and it is thus possible that female-female (vs. male-male) pairs were more likely to come from industries where cooperation and caring behaviors might be common (e.g., health care, education; Eagly & Steffen, 1984; Koenig & Eagly, 2014). Although Study 1 was focused in a masculine industry and found converging results (i.e., suggesting that our findings would generalize across more feminine and more masculine industries), future investigations need to examine whether the behavioral effects we uncovered would hold regardless of industry or field.

It could be argued that Study 2 findings may be due to other factors that tend to co-occur with gender. For instance, female managers appear to be more transformational and democratic than male managers (Eagly & Johnson, 1990; Van Engen & Willemsen, 2004), and there is some evidence that female (vs. male) employees respond more positively to this style (Ayman et al., 2009). Study 2 was also potentially limited by participant self-selection, as employees who overall feel closer to their supervisors may be more comfortable asking them to join the study. However, the convergence of correlational and experimental data, which consistently revealed the same interaction patterns, suggests that these issues do not necessarily compromise our conclusions. Nevertheless, future investigations should examine whether our findings would generalize to non-White or mixed-race employee-supervisor pairs, as the majority of employees and supervisors in Study 2 were White (see the online supplementary materials). Although the sample was drawn from a nationally representative panel, it is possible that non-White employees may feel uncomfortable approaching White supervisors about joining the study, resulting in a disproportionately White sample. In line with social identity theory, we would expect that greater demographic similarity between supervisor and employee would lead to more positive employee behaviors.

These limitations notwithstanding, across two studies, women compared to men were more supportive of female supervisors, and this difference appeared to be driven by an overall preference for same-gender (vs. other-gender) supervisors, which was more robust among male respondents compared to female respondents. These findings suggest that gender intergroup dynamics play a more complex role in attitudes toward female supervisors than is often portrayed in the literature.

References


DIFFERENTIAL SUPPORT FOR FEMALE SUPERVISORS


APPENDICES FOLLOW
Appendix A

Study 1 Vignette and Measures

Vignette

Mission statement:
Our purpose is to enable individuals and businesses to manage and expand their financial portfolios. We provide innovative products and services tailored to meet the specific and ever changing financial needs facing our customers. We build value for our investors by consistently producing superior operating results and taking a global approach to wealth management.

Supervisor (adapted from Fragale et al., 2011):
Mr. [Ms.] X holds a formal position that gives him [her] a great deal of control over valued resources within the Organization. As a result, Mr. [Ms.] X has influence over other people in the Organization because he [she] can assign tasks to them, evaluate their performance, and promote or fire them.

Measures

Perceptions of supervisor status. Perceptions of supervisor status were assessed with seven items rated from 1 (not at all) to 10 (extremely), developed for this study. Participants read, “Next we would like to get a sense of how you think X is viewed by other people in the Organization. We know that you don’t have a lot of information to go on, but please answer the following questions. To what extent would you say that others in the Organization . . .?”

1. Value X as a member of their group.
2. Respect X’s work-related ideas.
3. Value X’s opinions at work.
4. Respect the work X does in the organization.
5. Appreciate X’s unique contributions to the organization.
6. Approve of the way X does his [her] job.
7. Admire and look up to X.

Perceptions of supervisor competence. We developed three items asking participants to indicate the likelihood that the supervisor had obtained the powerful position due to a variety of reasons, rated from 1 (very unlikely) to 6 (very likely), presented simultaneously in random order. Participants read, “There are multiple ways one can get ahead, and many ways for people to advance at work and progress in their careers. Below is a list describing different ways in which X might have come to occupy his [her] position within the Organization. Please indicate the likelihood that they apply to X.” Three items were averaged to form a measure of competence, “X got this position because he [she] . . .”

1. Was highly competent and capable.
2. Was very qualified and had the right credentials.
3. Had considerable experience in the field.

Perceptions of supervisor warmth. We asked participants to rate from 1 (not at all) to 5 (extremely so) the extent to which the supervisor was likely to possess eight warmth characteristics (Fragale et al., 2011; Wiggins, 1979): cordial, respectful, cooperative, agreeable, impolite [r], disrespectful [r], uncooperative [r], and quarrelsome [r]. All traits were presented at the same time, in random order.

(Appendices continue)
Appendix B

Study 2 Measures

Perceptions of Supervisor Status

Six items rated from 1 (strongly disagree) to 5 (strongly agree) were averaged to form this measure. Employees were asked, “How do you feel about your supervisor? Please tell us whether you agree or disagree with these statements . . .”

1. I am happy with my supervisor.
2. My supervisor does a good job.
3. I think that my supervisor is a good leader.
4. I think that my supervisor is a poor role model (reverse-scored).
5. There are things I would want to change about my supervisor (reverse-scored).
6. I often wish that someone else was my supervisor (reverse-scored).

Employee In-Role Behavior

Five items rated from 1 (never) to 7 (always) were averaged to form supervisors’ reports of the frequency with which employees met their expectations. Supervisors were asked, “We would like to ask you how often this employee does the following things that are required as part of their job. How often does this employee . . .?”

1. Meet your performance expectations.
2. Follow your directives.
3. Fulfill the responsibilities specified in their job description.
4. Perform the tasks usually expected as part of their job.
5. Complete their work in a timely, effective manner.

Employee self-reported their behavior by rating the same five items, from 1 (never) to 7 (always). Employees were asked, “How often do you . . .?”

1. Meet the performance expectations of your supervisor.
2. Follow the directives of your supervisor.
3. Fulfill the responsibilities specified for someone with your position.
4. Perform the tasks usually expected by your work organization as part of your job.
5. Complete your work in a timely, effective manner.

Employee Extra-Role Behavior

Six items rated from 1 (never) to 7 (always) were averaged to compute a measure of extrarole behavior. Supervisors were asked, “How often does this employee . . .?”

1. Help others with work related problems.
2. Volunteer to do things that are not required in order to help your organization.
3. Volunteer to help orient new employees.
4. Put an extra effort into doing the job well, beyond what is normally expected.
5. Share knowledge with others even when he or she will not receive credit.
6. Work extra hours even when he or she will not receive credit for doing so.

Employee self-reported their behavior by rating the same six items, from 1 (never) to 7 (always). Employees were asked, “How often do you . . .?”

1. Help others with work related problems.
2. Volunteer to do things that are not required in order to help your organization.
3. Volunteer to help orient new employees.
4. Put an extra effort into doing your job well, beyond what is normally expected.
5. Share your knowledge with others even when you will not receive credit.
6. Work extra hours even when you will not receive credit for doing so.