The competence-confidence gender gap:

Being competent is not (always) enough for women to appear confident\(^1\)

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Abstract

Projecting a confident image is instrumental for one’s organizational success. However, little is known about what makes individuals be seen as confident at work. We draw on the social perceptions literature to suggest that competence is one determinant of confidence attributions, but its effect is moderated by individuals’ gender. We further propose that the differential gender effect of competence on confidence is carried on to predict the extent to which men and women are seen as influential in their organizations. Finally, we hypothesize that social attraction – or the extent to which others like an individual and want to bond with him/her – moderates the competence-confidence gender gap. Multisource, time-lag data from a software development multinational company showed that, as expected, competence had a positive effect on confidence attributions for men, but not for women, and the effect was carried on to organizational influence. Social attraction moderated this effect, as predicted. Men’s competence translated directly into an image of confidence, independently of whether others liked them or not. In contrast, women were able to reap the benefits of their competence only when others liked them. When women were disliked, their competence became a liability such that it reduced the extent to which they appeared confident to others.

Keywords: Confidence attributions; gender; competence; social attraction; organizational influence
The competence-confidence gender gap: Being competent is not (always) enough for women to appear confident

In a coaching session using 360-degree feedback, a female manager of a team of engineers at a large organization was happy to learn that her colleagues assessed her as highly competent. Yet, she was surprised to find out that her direct supervisor saw her as lacking confidence to master her managerial role. Shortly after, she was overlooked for a promotion to a top leadership position. She wondered if competence should not be enough to be seen as confident and to get a promotion. Although confidence self-perceptions have attracted research attention (e.g., Bandura, 1997), the importance of appearing confident in the eyes of others has been much more often evoked than empirically tested (e.g., Conger & Kanungo, 1987; Shamir, House, & Arthur, 1993), and surprisingly little is known about how individuals come to be seen as confident at work.

Appearing confident has been suggested to positively relate to many individual outcomes in organizations such as hiring and promotion decisions (Smith, 2013). Perhaps not surprisingly, the popular press offers many prescriptions for individuals “to instantly appear more confident,” with an implicit assumption that projecting a confident image is instrumental for individuals’ organizational success. Academic scholars have also evoked confidence as an essential quality for success in roles as varied as organizational leaders, politicians, or technical experts (Bass, 1991; Citrin & Green, 1986; Phillips, 2001), in part because those who exude confidence are more likely to be seen as trustworthy, reliable, and influential (e.g., Conger & Kanungo, 1987; Zaleznik & Kets de Vries, 1975).

Given the broad implications of appearing confident for professional success, it is important to understand how confidence attributions are formed and what consequences they entail. Drawing on the social perceptions literature (Eagly & Karau, 2002; Fiske, Cuddy, & Glick, 2007), we expect competence to drive confidence attributions depending
on an individual’s gender. In particular, we expect competence to play a stronger role in
determining confidence attributions for men than for women. We also suggest that through
attributions of confidence, the differential gender effect of competence on confidence is
carried on to predict the extent to which men and women are seen as influential in their
organizations. Finally, we propose that social attraction –or the extent to which others like
an individual and want to bond with him/her– moderates the competence-confidence
gender gap, such that women’s competence is translated into attributions of confidence
only when these women are liked by their colleagues (see Fig. 1).

Our study contributes to several streams of research. First, we contribute to research
on social perceptions (Fiske et al., 2007) by exploring how competence judgments have
different consequences depending on one’s gender and social attraction. Our results show
that the penalty for being disliked is not proportionate for women. Second, by providing a
nuanced view of the role of gender in the consequences of competence and social attraction
at work, our results also speak to the gender literature (e.g., Eagly & Karau, 2002). For
men, competence makes being liked irrelevant. However, women need to be liked to be
seen as confident and capitalize on their competence the same way men do. Being disliked
is a liability for competent women, but not for competent men. Our results also point to
certainty attributions as a mediating mechanism to explain gender effects at work on
broad individual outcomes such as being perceived as an influential player in the
organization. Finally, the leadership literature has noted the importance of appearing
confident and self-assured to emerge as leaders (Howell & Shamir, 2005). By documenting
that different “ingredients” are necessary for men and women to appear confident in their
professional roles and ultimately gain organizational influence, we also advance
understanding of influence and leadership processes in organizations.
Theory and hypotheses

Drawing on Bandura’s (1997) notion of self-efficacy, we define confidence attributions at work as others’ perceptions of the extent to which an individual sees him/herself as capable of meeting performance standards and able to shape his/her work environment in meaningful ways. We suggest that a natural antecedent to confidence attributions is perceptions of individuals’ competence, i.e., being industrious, skillful (Fiske et al., 2007), and proficiently carrying out one’s job responsibilities (Borman & Motowidlo, 1993).

The success of competent individuals in accomplishing their tasks is likely to directly translate into how confident and self-assured they appear to be in their professional roles. Compared with less competent individuals, those who achieve their goals are more likely to feel in control and interact with others in a confident and relaxed manner (Bartram, 2004; Motowidlo & Van Scooter, 1994). Similarly, the person-work role fit (e.g., Kristof-Brown, Zimmerman, & Johnson, 2005) and identity (e.g., Ibarra, Snook, & Guillén, 2010; Shamir & Eilam, 2005) literatures suggest that competent individuals are perceived as matching their professional roles, which makes them appear comfortable and secure in their roles. Thus:

**Hypothesis 1:** Competence is positively related to confidence attributions.

However, competence might not help equally all individuals to appear confident at work. Others’ reactions to an individual depend on the social categories the individual pertains to (Fiske et al., 2007). One of such categories is defined by gender. Gender roles (Biddle, 1979; Sarbin & Allen, 1968) prescribe women to display communal characteristics (e.g., helpful, empathetic) and men to be agentic (e.g., decisive, forceful) (Eagly & Karau, 2002; Fiske & Stevens, 1993). Gender is often salient in people’s minds and thus influences social judgments across many situations (Mayo, van Knippenberg, Guillén, &
Firfiray, in press; Stangor, Lynch, Duan, & Glas, 1992). To state the obvious, individuals cannot just leave their gender behind when they enter the workplace, which inevitably affects how they are perceived in their professional roles (e.g., Nkomo & Cox, 1999).

In professional roles sex-typed as masculine, expectations depict agentic behaviors. Because the agentic qualities associated with success in male-dominated occupations are also associated with men but not with women (Cejka & Eagly, 1999), women occupying traditionally male jobs are likely to be perceived as not equipped with necessary characteristics to succeed in their work roles, and their competence is likely to be insufficient to elicit social approval (Eagly & Karau, 2002). Consequently, in such contexts, women are less likely to be seen as fitting their professional roles than equally competent men are. On a related note, successful women in traditionally male jobs are likely to be seen as deviating from the prescriptive gender stereotypes, and this conflict between their gender and professional roles may trigger negative social consequences (Heilman, Wallen, Fuchs, & Tamkins, 2004). Furthermore, people tend to set higher ability standards for women than men, which makes it more difficult for women to prove that their performance is ability-based (Biernat & Kobrynowicz, 1997). Finally, women in general are seen as less confident than men (Bardwick & Douvan, 1972; Mayo, Kakarika, Pastor, & Brutus, 2012; O'Leary, 1974; Schein, 1973, 1975). We thus expect that in traditionally male jobs, the positive effect of competence on being seen as fitting and confident in one’s professional role is moderated by gender. Unlike for men, competence may be insufficient for women to be judged as fitting and confident in their professional roles. Thus:

**Hypothesis 2**: The positive relationship between competence and confidence attributions is moderated by gender, such that it is stronger for men than for women.

Does appearing confident at work matter? The more confidence individuals project in their roles, the more likely they are to elicit respect from others (Conger & Kanungo, 1987; Spreitzer, 1995), appear trustworthy and reliable (Conger & Kanungo, 1987;
Zaleznik & Kets de Vries, 1975), and gain credibility in their organizations (Kirkpatrick & Locke, 1991). An individual perceived as confident signals a congruence between his/her personal attributes and those required to successfully complete his/her job responsibilities, which is likely to lead to positive job outcomes (Edwards & Shipp, 2007; Hoffman & Woehr, 2006) such as higher employee job satisfaction and performance (Kristof-Brown et al., 2005), and being seen as an influential player in the organization (Bauer, 1964; Conger & Kanungo, 1987; Howell & Shamir, 2005). We define organizational influence as the degree of influence and participation individuals have in decision-making processes in the organization (Siegel & Ruh, 1973).

We suggest that those who appear more confident are likely to be more influential in their organizations. Leadership research has shown that people are more susceptible to being influenced by individuals who project a positive self-view (Nevicka, Ten Velden, De Hoogh, & Van Vianen, 2011). Moreover, group decision-making research suggests that individuals who appear confident end up being the most influential players in groups, independently of the depth of knowledge of the issue in question (Pfeffer & Sutton, 1998). Finally, social exchange theories highlight that to appear confident is a necessary condition for being influential in interpersonal relations (e.g., Nemeth & Watchler, 1974).

**Hypothesis 3**: Confidence attributions are positively related to individuals’ organizational influence.

Implicit to our rationale above is a relationship between competence and organizational influence mediated via confidence attributions and moderated by gender (Fig. 1), such that competence helps men more than women to get organizational influence by fostering their confidence appearance.

**Hypothesis 4**: The relationship between competence and organizational influence is mediated by confidence attributions and moderated by gender, such that the indirect effect of competence on organizational influence via confidence attributions is greater for men than for women.
The question remains whether there are circumstances under which the competence-confidence gender gap is reduced and women benefit from being competent the same way men do. Drawing on social perceptions literature, we suggest that social attraction moderates the interaction between competence and gender to predict a confident image. From Rosenberg and colleagues (1968) onwards, several streams of research (e.g., Eagly & Karau, 2002; Fiske et al., 2007) have pointed to still another dimension that needs to be taken into account to understand the ways in which people think of others: social ability. This dimension has been termed in various ways, such as warmth or trustworthiness, and in general refers to liking and interpersonal attraction.

The term “attraction” refers to an object’s ability to draw another object to itself, and social attraction has been conceived as the ability of a person to draw another person to him/her (“drawing one to another”) (Wortman & Linsenmeier, 1977). Socially attractive individuals are liked and seen as desirable task partners in the organizational context (e.g., Casciaro & Lobo, 2008; Montoya & Horton, 2014). Accordingly, in this paper, social attraction or liking refers to others’ choices to affiliate with an individual, reflected by their intentions to work together with him/her. Individuals that are liked and attractive to work with are perceived as having good intentions toward others and elicit more positive affect (Fiske et al., 2007).

We expect that being liked helps women to benefit from their competence to appear confident in their roles and thereby reduces the competence-confidence gender gap. It is normative for women, but not for men, to portray themselves in terms of their relational, social abilities (Leary, Robertson, Barnes, & Miller, 1986), and women’s self-worth is to a large extent derived from positive social relationships (Cross & Madson, 1997; Josephs, Markus, & Tafarodi, 1992). Likeable women, who act consistently with the social expectations ascribed to their gender, see themselves more positively in their roles and
experience less negative affect (Higgins, 1989; Wood, Christensen, Hebl, & Rothgerber, 1997), which is likely to translate into a more confident image at work. Enacting a role in a gender-consistent manner also increases an individual’s stamina and improves self-regulation (Vohs, Baumesiter, & Ciarocco, 2005). In addition, competent women who fulfill gender role expectations might find it easier to integrate their professional self into their identity, which can ultimately boost their motivation to succeed in their professional roles (Karelaia & Guillén, 2014). Finally, for women who fulfill requirements ascribed to their gender role, there may be a spillover effect such that they may be perceived more positively in other roles they enact, including professional roles (e.g., Petriglieri, 2011). Thus, being liked may help women by making them appear to be able to both fulfill the gender role prescriptions and essential tasks of their jobs that require interacting with others. These processes imply that social attraction may increase the likelihood that competent women are perceived as confident in mastering their professional roles.

We also argue that when social attraction is low, competence is likely to constitute a liability for women. In particular, high competence may paradoxically make women appear less confident in their professional roles, thereby magnifying the competence-confidence gender gap. Competent individuals are likely to voice their opinions and take initiative, which may increase their visibility and make others perceive them as eager to get ahead and seek responsibility and recognition (Hogan & Holland, 2003). Being visible can harm competent women precisely when they are disliked. Because social ability is an essential dimension on which women are implicitly evaluated (Judd, James-Hawkins, & Yzerbyt, 2005; Kirsch & Kuiper, 2002), women are penalized for not being liked (Eagly & Karau, 2002; Fiske & Stevens, 1993). The visibility of competent women can backfire when it is paired with low social attraction, as it may make the “fundamental flaw” of not being liked more salient.
Moreover, people tend to make more negative inferences of the social ability of competent women than competent men (Kervyn, Bergsieker, & Fiske, 2012). When disliked, competent women may be seen as truly lacking social ability and thus unable to handle their relationships. Because women are expected to be socially capable – e.g., be a good team player (e.g., Eagly & Carli, 2003; Rudman & Glick, 1999), competent and disliked women may be seen as especially lacking the presumably essential female ingredient. Consequently, because women cannot be judged independently of their social relations (Cross & Madson, 1997), competent disliked women may be seen as incapable of accomplishing their tasks the “right way,” that is, getting work done in collaboration with others (Rudman & Glick, 2001; Rudman & Phelan, 2008). Furthermore, social support has a greater impact on the well-being and self-view of women than men (Antonucci & Akiyama, 1987; Cross & Madson, 1997). Compared to men, women experience more negative emotions and in general react more negatively to the apparent lack of social support (Brotheridge & Lee, 2010; Sarason, Levine, Basham, & Sarason, 1983), which may be perceived as a sign of insecurity. These processes imply that more competence paradoxically leads to lower confidence attributions for women when they are disliked.

In contrast, for men, competence is likely to positively relate to confidence attributions regardless of being liked. This is so because men’s self-worth depends more on individual task accomplishments than social connections, and it is normative for men to portray themselves as highly competent (Leary et al., 1986). Men are expected to be competent and industrious and do not need to be liked to make a good impression (Eagly & Karau, 2002). As a consequence, their competence helps them to be perceived as confident in their roles regardless of their social appeal. Thus, social attraction is a necessary condition to reduce the competence-confidence gender gap: while the association between
competence and confidence attributions is always positive for men, for women it is only positive when social attraction is high and turns negative when social attraction is low.

**Hypothesis 5:** Competence, gender, and social attraction jointly predict confidence attributions. When social attraction is high, the gender differences in the relationship between competence and confidence attributions are smaller than when social attraction is low.

**Method**

**Sample and procedure**

We tested our model on a multisource time-lag data from 810 raters at Time 1 and 1,236 raters along with 22 direct supervisors one year later on 236 focal engineers from a multinational software development company. Engineers worked in teams on time management software for service organizations. Because of the project-based team structure, the engineers in our sample had no line management responsibilities and one direct supervisor was assigned to each of the 22 project teams in which the engineers were grouped.

Data was collected from various sources at two time points with one year in between to warrant sufficient time lag to separate the measurement of predictors from mediators and outcome variables to avoid the common method bias. At Time 1, the human resources department solicited voluntary participation of 352 engineers via an online survey. Participants were assured their responses would be confidential. Focal engineers’ competence and social attraction were evaluated by their superiors, peers, and collaborators. We obtained responses from 981 raters corresponding to 297 engineers (84% response rate). In Time 2, 22 direct supervisors were asked to rate the confidence attributions of the 297 focal engineers, and a larger set of observers were asked to evaluate their organizational influence. Observers in Time 2 included also focal engineers’ internal
clients (i.e., employees who receive services produced by the engineers as inputs to their own work) in addition to superiors, peers, and collaborators. To avoid the common method bias, direct supervisors were not included in the set of observers who were asked to evaluate employees’ organizational influence. We obtained responses from all 22 direct supervisors and 1,214 raters corresponding to 236 focal engineers (response rate = 80%). Among the 236 focal engineers (22% female), the average age was 42 years ($SD = 8.34$), and average work experience was 14.59 years ($SD = 8.74$).

**Measures**

Unless otherwise indicated, respondents indicated the extent to which they agreed with each item on a 7 point Likert-type scale from $1 = not at all$ to $7 = very much so$.

**Competence.** Competence was assessed through the three-item task performance scale developed by Motowidlo and Van Scotter (1994). Observers rated participants on each of these items at Time 1. Sample items are “Performs at high level compared with others of the same rank” and “Exceeds standards for job performance” ($\alpha = .93$).

**Social attraction.** Since validated scales of social attraction were not available, drawing on previous literature on social attraction and liking (e.g., Casciaro & Lobo, 2008; Fiske et al., 2007; Montoya & Horton, 2014), we developed two items that reflect our operational definition of social attraction and assess the affiliative intentions to work close to the focal individuals: “I would like to work with this person in the future” and “I would like to have the opportunity to continue working with this person” ($r = .97$).

**Confidence attributions.** In Time 2, direct supervisors rated the extent to which participants appeared to be confident in their roles by responding to three items adapted from the self-confidence scale by Spreitzer (1995). Sample items include “S/he is confident about his/her ability to do his/her job” and “S/he thinks s/he masters the abilities to perform his/her work activities” ($\alpha = .93$).
**Organizational influence.** In Time 2, observers rated participants on the five items from the influence scale developed by Lam, Chen, and Schaubroeck (2002). Sample items are “In this organization, s/he has high degree of influence in company decisions” and “In this organization, his/her views have a real influence in company decisions” ($\alpha = .94$).

**Control variables.** In our analyses, we controlled for the effect of age (in integers), gender (0 = male; 1 = female), and years of work experience (in integers). We also controlled for confidence attributions in Time 1 to account for the possibility that competence perceptions and confidence attributions in Time 1 were related (and they indeed were, $r = .57$, see Table 1) and thus better disentangle the hypothesized effects. We assessed confidence attributions in Time 1 using the same scale as in Time 2 ($\alpha = .88$) (Spreitzer, 1995). Finally, because our focus was on confidence attributions (other-ratings), we controlled for participants’ confidence self-ratings as these were shown to also relate to the influence individuals have at work (e.g., Chan & Drasgow, 2001; Nevicka et al., 2011). To that end, in Time 1 we obtained engineers’ self-confidence using the self-version of Spreitzer’s scale (1995) ($\alpha = .83$). Results were almost identical in the models with and without the controls, and only confidence attributions in Time 1 had significant effects ($p < .05$) on confidence attributions and organizational influence in Time 2. Following Becker’s (2005) recommendations, we report the results from the models without impotent controls.

**Analyses**

To test our hypothesized model, we performed *structural equation modeling* (SEM, Bollen, 1989) analyses in STATA. Due to the nested nature of our data (i.e., 810 raters at Time 1 of 236 engineers working in 22 project teams each with a different supervisor), the answers were not independent, thereby violating the OLS regression assumption. Pertaining to a specific team and being evaluated by the same supervisor might have consequences for individual team members beyond their idiosyncratic characteristics. To
account for that, we conducted conservative tests of our predictions and clustered standards errors (Rogers, 1993) at the highest level of our data structure, i.e., teams. To avoid multicollinearity problems, we centered the predictor variables prior to computing the interaction terms (Edwards, 1994).

**Results**

**Measurement models**

We first assessed the underlying structure of the two measures assessed by observers at Time 1, i.e., competence and social attraction, through a confirmatory factor analysis (Bentler & Dudgeon, 1996). The two-factor model demonstrated a good fit with the data ($\chi^2(4) = 51.96$, RMSEA = .12, CFI = 1.00, SRMR = .02). A one-factor model that included all items as a single underlying dimension provided a significant decrease in fit with respect to the two-factor model ($\chi^2(5) = 168.18$, RMSEA = .20, CFI = 1.00, SRMR = .12; $\Delta\chi^2 = 116.22$, $\Delta df = 1$, $p < .001$). These results indicate the appropriateness of treating competence and social attraction as separate constructs.

**Preliminary analyses**

Descriptive statistics appear in Table 1. Competence and social attraction were positively correlated (.67, $p < .01$), as were confidence attributions and organizational influence (.43, $p < .001$). Gender was negatively related to confidence attributions and influence (-.08 and -.08, $p < .05$).

----------Insert Table 1 about here----------

**Hypotheses testing**

To test Hypothesis 1 that competence is positively related to confidence attributions, we included competence as a predictor of confidence attributions in Time 2 (Model 1, Table 2). In line with our prediction, competence had a positive and significant effect on confidence attributions in Time 2 (.17, $p < .001$), after controlling for confidence
attributions assessed in Time 1.

To test Hypothesis 2 regarding the moderating role of gender, we entered gender and the interaction between gender and competence as additional predictors of confidence attributions in Model 2. As shown in Table 2, the interaction was significant ($-17, p < .01$), and while the direct path from competence to confidence attributions was significant ($21, p < .001$), the path from gender was not ($-18, ns.$). A further simple slopes analysis (Bauer & Curran, 2005) revealed that the relationship between competence and confidence perceptions was stronger for men ($21, p < .001$) than for women ($04, ns.$), and that the slope difference (Dawson & Richter, 2006) between men and women was statistically significant ($17, p < .01$) (Fig. 2). These results provide support for Hypothesis 2.

The relationship between confidence attributions and organizational influence was positive and significant ($33, p < .001$; Model 2 in Table 2), in support of Hypothesis 3. We then tested the indirect effects of competence on organizational influence through confidence attributions for men and women. We expected the indirect effect to be larger for men than for women (Hypothesis 4). In line with our prediction, for men, the indirect effect was positive and significant ($06, SE = .02, p < .001$) while it was not for women ($01, SE = .01, ns.$). We used a bootstrapping procedure to construct 95% bias-corrected confidence intervals (CI) for the conditional indirect effects, based on 5,000 random samples with replacement from the full sample (Shrout & Bolger, 2002). For men, the 95% CI excluded zero, [04, .10], suggesting a significant indirect effect, whereas for women the 95% CI included zero, [-.02, .05], which provides further support to Hypothesis 4.

Finally, we tested a series of SEM models (Anderson & Gerbing, 1988) to explore whether social attraction moderated the interaction between gender and competence in predicting confidence attributions (Hypothesis 5). We first tested our complete model (Fig.
1), specifying the effects of competence, gender, and social attraction, and their interactions on confidence attributions, and, through the latter, on organizational influence. The unstandardized solution is shown in Table 2 (Model 3). We then fit three additional nested models to detect misspecifications (Saris, Satorra, & Sörbom, 1987) and further test the hypothesized effects. Model 4 included all paths from Model 3 as well as the direct paths from competence, social attraction and gender to organizational influence. As shown in Table 2, the direct paths from competence and social attraction to organizational influence were significant (.08, \( p < .05 \), and .10, \( p < .01 \), respectively). Model 5 included all paths from Model 4, plus direct paths from the interactions to organizational influence. As shown in Table 2, none of the interactions was significant in predicting organizational influence. Based on these results, the “best” model is the hypothesized model with additional direct paths from competence and social attraction to organizational influence (Model 6 in Table 2). We used this model for subsequent analyses.³ As shown in Table 2 (Model 6), the three-way interaction was significant in predicting confidence attributions (.11, \( p < .001 \)), supporting Hypothesis 5. The paths competence \( \rightarrow \) confidence attributions (.18, \( p < .001 \)) and gender \( \rightarrow \) confidence attributions (-.30, \( p < .05 \)) were significant, whereas the path social attraction \( \rightarrow \) confidence attributions was not (.01, \( n.s. \)). To interpret the three-way interaction, we analyzed the two-way competence x gender interaction separately for high and low levels of social attraction (Fig. 3a-3b).

When social attraction was high (Fig. 3a), the simple slope of the effect of competence on confidence attributions was positive and significant both for men and women, .14, \( SE = .04, p < .01 \) and .11, \( SE = .06, p < .05 \), respectively. A slope difference test indicated that the slopes for men and women did not differ significantly from each other (.03, \( n.s. \)), providing further support to Hypothesis 5. In contrast, when social attraction was low (Fig. 3b), a simple slope analysis revealed that competence had a
positive and significant effect on confidence attributions for men, \( .22, SE = .05, p < .001 \),
and a negative and significant effect for women, \( -.09, SE = .04, p < .05 \). A slope difference
test showed that the difference between these slopes was significant, \( (.31, p < .001) \), in line
with Hypothesis 5.4

Discussion

Because projecting confidence is related to organizational success, it is critical to
understand what makes individuals be seen as confident in their professional roles. We
documented a competence-confidence gender gap whereby competence invariably helps
men but not women to appear confident in mastering their professional roles. Importantly,
these effects are carried on to further positive outcomes, such as organizational influence.
We also found that social attraction, or being liked by colleagues, moderates the
competence-confidence gender gap. While for men competence is sufficient to appear
confident, competent women must be liked to reap the benefits of their competence. So
much so that being disliked turns competence into a liability for women such that,
paradoxically, more competent women appear less confident.

By exploring how social judgments of men and women are formed in work settings
and documenting a multiplicative effect of competence, gender, and social attraction, we
extend knowledge on social perception in organizations. While competence has often been
treated as a dependent variable in organizational behavior research (e.g., Judge, Thoresen,
Bono, & Patton, 2001; Kluger & DeNisi, 1996; Mento, Steel, & Karren, 1987), studies that
explore the consequences of competence perceptions on subsequent social judgments in
organizational settings are still scarce. A notable exception is Casciaro and Lobo (2008)
that documents how the effect of competence on seeking an individual’s advice and input is
moderated by positive affect, logically related to social attraction. The authors found that
competence cannot compensate for being disliked. In this study, we drew on the role incongruity research (e.g., Eagly & Karau, 2002) to assess gender effects in the interplay of competence and social attraction. Our results showed that the penalty for being disliked is not proportionate for women. While being liked is a necessary condition for women to capitalize on their competence and be seen as confident and influential at work, competent men are seen as confident and influential whether they are liked or not.

Our results provide a nuanced view of how gender shapes the consequences of competence and social attraction by pointing to confidence attributions as a mediator of gender effects at work. Scholars have suggested that to be positively regarded at work, women need to be liked (e.g., Ely, Ibarra, & Kolb, 2010), and our results suggest that they need to be both liked and competent. Competent and liked women project the confidence image that allows them to be regarded as influential players in their organizations. Importantly, being disliked turns competence into a liability for women in terms of how confident in mastering their professional roles they appear in the eyes of others.

This research also broadens the understanding of the antecedents of leadership in organizations. Leadership literature has long noted the importance of appearing confident to influence others and emerge as a leader (Howell & Shamir, 2005). Our results show that confidence attributions indeed matter for being seen as influential at work. While influence is also a function of status cues (Hass, 1981), it seems unlikely that women can overcome the disadvantage of their lower status (Ridgeway, 2001) by exhibiting just high competence levels (see also Meeker & Weitzel-O’Neill, 1985). Our findings suggest that different standards are set for men and women to be influential. Being liked is disproportionally more important for women than men to gain influence in organizations.

As all studies, this study is subject to limitations that point toward directions for future research. First, the nature of our data did not permit to disentangle the dynamic
relationship between social attraction, competence, and their consequences over time. For example, it is possible that confidence attributions and perceived influence affect competence perceptions and liking. Additional longitudinal studies are needed to nail down the dynamic relationships between variables that underlie human social perceptions in the workplace. Second, our sample consisted of computer engineers – arguably, a male-typed profession. Future studies are needed to establish the generalizability of our results to more gender-neutral professions. On a related note, only 22% of the engineers of our sample were women, and only 1 out of 22 supervisors was female. Although these proportions may be representative of many industries where women face multiple barriers to get to the top, future studies need to replicate our findings with samples including more women – in general and in supervisory positions in particular. Finally, broadening the criterion domain would be desirable to understand other consequences of confidence attributions, such as promotability or role assignment.

**Conclusion**

This research illustrates a competence-confidence gender gap: while men’s competence translates directly into an image of confidence and influence, for women being competent is not always enough to appear confident. Social attraction is a key to further understand these effects. While men benefit from their competence independently of whether others like them, women must be liked to reap the benefits of their competence. When women are disliked, their competence paradoxically reduces the extent to which they appear confident to others. Although no single study can provide a definitive answer to understand social perceptions at work, our results highlight the importance of monitoring how competent men and women are perceived in organizations and how they progress in their careers – to create equal opportunities to all employees and promote fair merit-based decisions.
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## Table 1. Descriptive statistics

<table>
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<tr>
<th>Variable</th>
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<th>Mean</th>
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<tr>
<td>1 Competence</td>
<td>observers, Time 1</td>
<td>5.22</td>
<td>1.16</td>
<td>(.93)</td>
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<td>2 Gender</td>
<td>personnel data</td>
<td>.22</td>
<td>.42</td>
<td>.02</td>
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<tr>
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<td>5.88</td>
<td>1.23</td>
<td>.67**</td>
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<tr>
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<td>supervisors, Time 2</td>
<td>5.57</td>
<td>.97</td>
<td>.27**</td>
</tr>
<tr>
<td>5 Organizational Influence</td>
<td>observers, Time 2</td>
<td>4.79</td>
<td>.84</td>
<td>.36**</td>
</tr>
<tr>
<td>6 Age</td>
<td>personnel data</td>
<td>42.18</td>
<td>8.34</td>
<td>-.05</td>
</tr>
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<td>7 Experience</td>
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<td>8.75</td>
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<td>8 Confidence Attributions</td>
<td>observers, Time 1</td>
<td>5.94</td>
<td>.94</td>
<td>.57**</td>
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<tr>
<td>9 Self-Confidence Perceptions</td>
<td>selves, Time 1</td>
<td>6.29</td>
<td>.66</td>
<td>.091**</td>
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</tbody>
</table>

Note: 810 observers and 236 selves in Time 1. In Time 2, 22 direct supervisors rated participants' confidence attributions, and 1,214 observers rated organizational influence. The ratings of organizational influence were aggregated at participant level because the set of observers for each participant in Time 1 and Time 2 was not identical. Reliabilities appear in parentheses on the diagonal.

**p < .01, *p < .05.
Table 2. SEM models

<table>
<thead>
<tr>
<th>Variable</th>
<th>2-way interaction: Competence and Gender</th>
<th>3-way interaction: Competence, Gender, and Social Attraction</th>
<th>Variable</th>
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<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 3 (Hypothesized Model)</td>
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<tr>
<td></td>
<td>$b$</td>
<td>$SE$</td>
<td>$b$</td>
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<tr>
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<tr>
<td>Confidence Attributions T1</td>
<td>.13***</td>
<td>.03</td>
<td>.13***</td>
</tr>
<tr>
<td>Competence</td>
<td>.17***</td>
<td>.04</td>
<td>.21***</td>
</tr>
<tr>
<td>Gender</td>
<td>-.18</td>
<td>.16</td>
<td>-.17**</td>
</tr>
<tr>
<td>Competence x Gender</td>
<td>-.17**</td>
<td>.05</td>
<td>-.17**</td>
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<td></td>
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<tr>
<td>Confidence Attributions T2</td>
<td>.33***</td>
<td>.04</td>
<td>.33***</td>
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<tr>
<td>Confidence Attributions T1</td>
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<td>.06</td>
<td>.22***</td>
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<tr>
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<td>.03</td>
<td>.13***</td>
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<td>.03</td>
<td>.18***</td>
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<tr>
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<td>.15</td>
<td>-.30*</td>
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<tr>
<td>Competence x Gender</td>
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<td>-.17*</td>
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<td>.05</td>
<td>.01</td>
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<td>.03</td>
<td>-.03</td>
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<tr>
<td>Social Attraction x Gender</td>
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<td>.06</td>
<td>.07</td>
</tr>
<tr>
<td>Competence x Social Attraction x Gender</td>
<td>.11**</td>
<td>.03</td>
<td>.11***</td>
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<tr>
<td><strong>Organizational Influence</strong></td>
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<tr>
<td>Competence Attributions T2</td>
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<td>.30***</td>
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<tr>
<td>Confidence Attributions T1</td>
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<td>.10*</td>
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<tr>
<td>Competence</td>
<td>.08*</td>
<td>.03</td>
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<tr>
<td>Social Attraction</td>
<td>.10**</td>
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<td>Competence x Gender</td>
<td>-.04</td>
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<td>Competence x Social Attraction x Gender</td>
<td>-.04</td>
<td>.05</td>
<td>-.04</td>
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</table>

Note: Results of SEM analyses using STATA. Errors are clustered due to multiple observers for 236 participants pertaining to 22 teams. With regard to global fit indices of the SEM models, we report the squared root mean of residuals (SRMR) and the coefficient of determination (CD) as these are the only fit indices available for models with clustered errors in STATA. *** $p < .001$, ** $p < .01$, * $p < .05$. 

| CD | .15 | .16 |
| SRMR | .03 | .03 |
| CD | .17 | .21 |
| SRMR | .03 | .00 | .00 | .00 |
Figure 1. Hypothesized model
Figure 2. Two-way interaction: Relationship between competence and confidence attributions moderated by gender.
Figure 3. Three-way interaction: The competence-confidence relationship moderated by gender and social attraction

Fig. 3a. High social attraction

Fig. 3b. Low social attraction
Endnotes

1 For example, http://www.nerdfitness.com/blog/2010/09/09/5-ways-to-immediately-appear-more-confident/

2 As noted above, in Time 2, the human resource manager sent the online survey to assess organizational influence to a larger set of observers than in Time 1. Moreover, due to the dynamic project-based structure of work at the company, observers in Time 1 and 2 were not identical. Consequently, for each participant, we averaged organizational influence across all observers in Time 2. The inter-class correlations for the resulting measure surpassed the conventional minimal thresholds to support aggregation (LeBreton & Senter, 2008): ICC(1) = .32 and ICC(2) = .61.

3 We conducted additional analyses to verify that a potential endogeneity issue did not bias the estimated coefficients (e.g., Antonakis, Bendahan, Jacquart, & Lalive, 2010). In particular, we tested an alternative model in which the error terms of confidence attributions and organizational influence were allowed to correlate. The error terms correlation was not significant (-.15, ns.), suggesting that this correlation should not be included in the model, and that endogeneity was not an issue in our analyses.

4 We performed additional analyses to further explore the three-way interaction and gender effects. When social attraction was high (+1SD; Fig. 3a), the competence x gender interaction was not significant in predicting confidence attributions. Even if men were seen slightly more confident than women at any level of competence, predicted values difference tests (Lee & Antonakis, 2014) showed that the gender differences in confidence attributions were significant neither at low nor at high competence: - .17 and - .24, ns., respectively. Thus, for likeable participants, gender did not moderate the relationship between competence and confidence. A bootstrapping analysis of the indirect effect of competence on organizational influence via confidence when social attraction was high showed that the indirect effect was positive and significant (.04, SE = .02, p < .01), as expected. In contrast, when social attraction was low (-1SD; Fig. 3b), the competence x gender interaction was significant in predicting confidence attributions. Competent and disliked men were judged to be more confident than were competent and disliked women (5.90 vs. 5.14, p < .001). Bootstrapping analyses of the indirect effect of competence on organizational influence via confidence attributions conducted separately for men and women revealed that at low values of social attraction, the indirect effect was positive and significant for men (.07, SE = .02, p < .001), and negative but not significant for women (-.03, SE = .03, ns.).