# Viewing Perspective Taking Through the Lens of the Social Network

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#### **ABSTRACT**

This study examines the effect of perspective-taking on job embeddedness and the mediating role of informal workplace social networks using network data from 179 employees of a large bank in the United States. We found that perspective-taking has a conditional indirect effect on embeddedness through a moderated mediated pathway involving positive network centrality and gender. Although perspective-taking typically conveyed benefits to males in the form of more central positions in positive networks, women who were high in perspective-taking were often penalized, holding less central positions in these same networks. Consequently, women were less embedded within their organization. In addition to being the first to address the role of perspective-taking on informal workplace networks, this study adds to the relatively sparse research on negative ties in organizations.

Keywords: Embeddedness; Social Network Analysis; Perspective Taking

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#### INTRODUCTION

The cognitive tendency to adopt the perspective of others, or perspective taking, has long been considered a vital aspect of social functioning (Mead, 1934; Piaget, 1932). A key determinant of empathetic concern, it has been shown to abate stereotyping, prejudice, and social aggression, while improving social bonds (Galinsky & Moskowitz, 2000; Venkataramani, Labianca, & Grosser, 2013). Perspective taking is fundamental to collaborative working and an important driver of satisfaction and adjustment in close personal relationships (Galinsky, Ku, & Wang, 2005; Parker & Axtell, 2001). The concept is critical to modern organizations where work is increasingly accomplished through informal workplace ties rather than formal channels delineated by organizational charts (Parker & Axtel, 2001). In this context, interpersonal dynamics are paramount and understanding the underlying mechanisms that drive close relationships may lead to greater organizational performance and a reduction in employee withdrawal.

Despite its increasing relevance, little scholarship has been dedicated to perspective taking within organizations and, to our knowledge, no research has examined the effect of perspective taking on informal workplace social networks or organizational attachment. Fortunately, research on intimate relationships has directly addressed the link between perspective taking, interpersonal communication, and relationship maintenance and satisfaction. For instance, Davis and Oathout (1987) found that perspective taking affects relationship satisfaction through its influence on the behaviors that individuals engage in and subsequent partner perceptions of those behaviors. Specifically, individuals with high levels of perspective taking tend to be more understanding, sensitive to their partner's needs, and are perceived as having a more positive outlook, being more even-tempered, and worthy of trust. Moreover, this research indicates that the effect of perspective taking on relational maintenance and satisfaction increases over time.

Scholarship on interpersonal communication generally agrees with these findings and suggests that people like to be around others who are high in perspective taking (Long & Andrews, 1990; Galinsky & Moskowitz, 2000; Galinsky et al., 2005). This is particularly important because perspective taking helps to facilitate interaction, allowing partners to adapt and change in ways that unifies interests and values, and creates enduring social bonds (Long & Andrews, 1990). Therefore, it is possible that perspective taking plays an important role in the formation and maintenance of relationships at work. However, there are meaningful differences between workplace relationships and romantic relationships (i.e., when they are not one and the same) that must be considered. Pertinent to our discussion is that women often find themselves walking a "tightrope" at work between being too communal (i.e., feminine) and too agentic (masculine) in order to abide by social norms (Heilman & Okimoto, 2007). Because perspective taking is typically seen as a feminine trait (Rueckert, 2011), it is possible that it has different and perhaps opposing effects on important workplace outcomes for men and women. Ultimately, these differences may determine their position in workplace social networks and the ties that they are able to form in organizations.

Such informal networks have been shown to influence a broad range of important organizational outcomes such as employee performance, job satisfaction, affective commitment, and job embeddedness, all fundamental mechanisms underlying an employee's decision to stay or leave (Mitchell et al., 2001; Brass, 1984; Venkataramani et al., 2013). Organizations are particularly interested in how to maintain employment relationships because of the enormous

financial cost of employee withdrawal (Hom & Xiao, 2011). For example, Right Management estimates that over 83% of employees are planning to look for a job in 2014 and replacement costs alone are expected to reach as high as 50-60 percent of an employee's annual salary (Allen, Bryant, & Vardaman, 2010). Understanding the importance of communicating across perspectives and world views to one's informal workplace social network may help us to promote more cohesive work environments, improve social bonds, and ultimately increase staying behavior.

Therefore, the purpose of the current study is to examine the effect of perspective taking on organizational attachment (i.e., embeddedness) and the mediating role of informal workplace social networks. In so doing, we first discuss the concept of perspective taking and define it in the context of employment. We then propose that perspective taking will influence one's centrality in positive and negative tie networks. Finally, we argue that perspective taking has a conditional indirect effect on embeddedness through these informal networks with differential effects for men and women, creating a moderated mediated relationship. In addition to being the first to examine the effect of perspective taking on embeddedness (through informal networks), our approach is unique in that we address the role of positive and negative networks, whereas most research has largely ignored individuals' negative ties (e.g., Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998; Payne, Moore, Griffis, & Autry, 2011).

### **CONCEPTUAL BACKGROUND**

# **Perspective Taking**

Research on perspective taking has thrived for the better part of a century, but only recently has it begun to take hold within the management discipline. In his early work on perspective taking, Piaget (1932) showed that the ability to take on the perspective of others is a fundamental aspect of child development. This was demonstrated with the "three mountains task" (Piaget & Inhelder, 1968) in which a child was told to look at three model mountains and select a photograph that represented other student's perspectives (represented by chairs). Although young children were often not able to perform the task, older students could. Thus, the ability to adopt another's point of view was considered to be a sign of cognitive maturity (i.e., complexity). As individuals advance developmentally, "their thinking becomes more complex and abstract and, paradoxically, also more precise and specific. Correspondingly, they become increasingly able to empathize with others who hold conflicting views" (Bartunek, Gordon, & Weathersby, 1983: 274).

Perspective taking and more generally, empathy, have been viewed as a cognitiveaffective experience that varies based on the situation. The premise is that empathetic experience will vary as a function of one's cognitive appraisal of a situation (Parker & Axtell, 2001). This approach has allowed social psychologists to study the effects of contextual factors on perspective taking and is a fundamental aspect of interventions aimed at enhancing empathy (e.g., Goleman, 1996). For instance, social psychologists have been able to elicit empathic states by asking participants to imagine how they would feel given a certain situation or to imagine what a target is feeling or thinking (Davis, Conklin, Smith, & Luce, 1996). This work has been particularly useful in the context of intimate relationships where empathetic concern is considered to be a necessary condition for successful social interaction within a marriage or close relationship (Long & Andrew, 1990).

Although perspective taking and empathy are sometimes used interchangeably, it is important to note that the former is generally considered a "cognitive or intellectual process that results in affective response of empathy" (Parker & Axtell, 2001: 1087). For empathy to occur, the person experiencing it must be aware that it is happening to someone else and understand what that person is feeling (Hoffman, 1975). Thus, how one experiences empathetic concern depends on how he or she perceives or appraises others and their situation. Moreover, while perspective taking drives empathetic concern, research has shown that empathy is not its only consequent. When people engage in perspective taking they are more likely to empathize with the target, identifying or understanding their experiences (Egan, 1990) and feeling their pleasure or pain (Aron, Aron, Tudor, & Nelson, 1991; Betancourt, 1990). However, they also tend to recognize contextual factors that may lead to things turning out badly for the target (e.g., economic conditions) and acknowledge internal factors (e.g., hard work) that may lead to successful outcomes. Therefore, in addition to being more empathetic, individuals who are high in perspective taking also tend to make positive attributions about the target's behavior (Parker & Axtell, 2001). In the current study, we define perspective taking as the tendency to adopt the psychological perspective of another person.

# **Informal Workplace Ties**

The field of social psychology has established that perspective taking enhances interpersonal relations by reducing aggression and increasing helping behaviors (Batson, 1991). This is particularly relevant to organizations, where employees have multiplex ties and work is done through myriad informal relationships with others in their organization (e.g., advisors, enemies, friends). These networks can convey benefits to employees through social capital or the idea that one's social contacts create opportunities for competitive success for employees and their work groups (Burt, 1992; Putnam, 1995). Such benefits are most often seen via positive network ties characterized by liking and respect, where individuals seek out one another for resources such as advice and friendship. Positive informal ties can facilitate work and supplement formal structures of organizations by providing alternative ways to overcome problems that the formal structure cannot handle (Soltis, Agneessens, Sasovova, & Labianca, 2013).

However, informal workplace ties can be problematic for organizations, such as the case when two employees would prefer to avoid one another. This type of relationship, called a negative tie, can generally be characterized by animosity and avoidance. Because negative relationships lack psychological proximity and empathy found in positive ties, coworkers' dislike of someone may result in antisocial behavior toward that person, such as gossiping, being rude, and intentionally harming his or her work (Brass, Butterfield, Skaggs, 1998). As a result, the individual tends to perceive being ostracized and socially excluded (Grosser, Sterling, Scott, & Labianca, 2010).

Although negative informal network ties seem to play an important role in organizations, scholarship on negative networks and employee staying remains sparse. A rare exception is a recent paper by Venkataramani et al. (2013). The authors found that centrality in negative tie networks reduced organizational attachment through a mediated pathway involving satisfaction with workplace relationships. Further, they found the effect of employee centrality (in positive tie networks) on satisfaction with workplace social relationships to be irrelevant when employees had fewer negative ties, but stronger when employees had more negative ties. Therefore, it

appears that centrality in positive networks can offset some of the deleterious effects of being central in a negative tie network.

We draw from this work and make a unique contribution to the management literature by utilizing the job embeddedness model (JEM) to explain the influence of perspective taking on the extent to which an individual can become stuck (i.e., embedded) in an organization as mediated through his or her network position. In the following two sections, we discuss the mechanisms underlying this process and the moderating role of gender.

#### Job Embeddedness Model

The job embeddedness model argues that a broad range of financial, psychological, and social mechanisms influence employee retention and that these influences are present both on and off the job (Mitchell et al., 2001). It is comprised of three dimensions, including links, fit, and sacrifice, which are further categorized into two sub-dimensions: organization and community (i.e., on and off-the-job). An employees social ties represent his or her links, whereas fit refers to an employee's perceived compatibility with the organization and community, and sacrifice represents what would be lost if one were to exit the organization (i.e., material, psychological, and social costs).

Research on job embeddedness theory has consistently demonstrated that employees who are highly embedded have greater difficulty in leaving their jobs (Crossley, Bennett, Jex, & Burnfield, 2007; Lee, Mitchell, Sablynski, Burton, & Holtom, 2004; Mallol, Holtom, & Lee, 2007). The basic premise is that high levels of perceived links, fit and sacrifice cause employees to feel stuck to the point that their behavior is constrained, abating employee withdrawal. It is similar to affective predictors of turnover such as organizational commitment and job satisfaction insofar as there is a sense of loss or sacrifice measured in both cases. However, its indicators have a less affective nature in that links are non-affective and sacrifice and fit are secondarily or indirectly affective. Informal workplace ties are particularly relevant to our discussion of job embeddedness because they drive one's feelings and thoughts of being stuck or enmeshed in the organization, providing strong cues about the employees position in the organization and what would be lost if he or she decided to leave (Soltis et al., 2013). Moreover, the ties that one forms in an organization can give an employee a sense of inclusion and well-being or conversely result in feelings of social exclusion and negative affect (Venkataramani et al., 2013). Subsequently, informal ties provide valuable insight into how embedded employees will feel and more broadly how attached they will become to the organization. In the following sections, we describe how perspective taking can influence employees' positions in these networks and subsequently the extent to which they become embedded in the organization.

Perspective taking and network centrality. The extent to which an individual is central to a positive network is represented by the number of others who seek this person out for positive ties such as advice and friendship (Freeman, 1979). On the other hand, centrality in negative tie networks is represented by the number of individuals who prefer to avoid a focal person. We contend that individuals high in perspective taking will have higher centrality in positive tie networks and lower centrality in negative tie networks for two reasons. First, as discussed above, when a person actively engages in perspective taking toward others, he or she is more likely to empathize with those individuals, identifying or understanding their experiences (Egan, 1990), feeling concern about their shortcomings (e.g., Davis, 1983), and generally responding with acceptance. Given that the need to belong has long been shown to be the most important

motivator of human behavior once physiological needs for safety and nourishment have been met (Maslow, 1968; Baumeister & Leary, 1995), it is likely that individuals will seek to establish and maintain ties with those who are high in perspective taking. In turn, employees are expected to feel higher levels of attachment to and embeddedness within the organization.

Second, people often view and explain others' behavior in a more negative way than they would their own. This is depicted by the actor-observer bias (Jones & Nisbett, 1971), which suggests that people tend to attribute the behavior of others to their disposition or character, but tend to take into account contextual factors when explaining their own behavior. An extension to this research is the self-serving bias (Bernstein, Stephan, & Davis, 1979), which suggests that individuals provide different explanations of their own behavior based on whether an outcome is positive or negative. Successful outcomes are typically associated with internal factors, such as hard work and ability, whereas failure is explained by contextual factors such as task difficulty. Conversely, the behavior of others is often explained by situational factors only when he or she is successful and failures are usually depicted as the result of dispositional factors.

Because these biases are reduced when individuals take on the perspective of others (Galper, 1976; Regan & Totten, 1975), attributions about others' behavior become more positive and more in line with how people tend to view their own behavior. This may increase feelings of embeddedness in two ways. First, it is possible that individuals, even those who are not high in perspective taking, will feel the need to respond in kind creating a virtuous cycle of positive interactions. Second, Brass (1985) and others (e.g., Ibarra, 1992; McPherson & Smith-Lovin, 1987) have shown that people prefer to be around those who are similar to themselves. Taking on the perspective of another person implies a measure of similarity in cognitions and attitudes. Thus, to the extent someone high in perspective taking demonstrates similarity in thoughts and feelings about an individuals behavior, it is likely that his or her target will be motivated to continue interacting with that person. Subsequently, the employee becomes more enmeshed in the organization by perceiving more links, increased fit, and greater costs of leaving.

Hypothesis 1: Perspective taking will be positively related to centrality in positive tie networks (1a) and negatively related to centrality in negative tie networks (1b).

## Informal workplace ties and job embeddedness.

Davis noted that '[a] perspective-taking ability should allow an individual to anticipate the behavior and reactions of others, therefore facilitating smoother and more rewarding interpersonal relationships' (Davis, 1983, p. 115). Indeed, research has shown that taking on the perspective of others increases a sense of psychological closeness in relationships (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997; Pickett, Gardner, & Knowles, 2004). Unfortunately, an absence of rewarding social bonds can be detrimental to an individual's wellbeing and ultimately result in psychological devastation – such as when individuals find themselves highly central in negative networks. In this situation, individuals often perceive being ostracized and socially excluded (e.g., Grosser et al., 2010). As a consequent, they are more likely to personalize conflict, responding with distress and in some cases even feel physical pain (Pruitt & Rubin, 1986; Taylor, 1991; Eisenberger, Lieberman, & Williams, 2003).

Social isolation impacts social, cognitive, and physical functioning, with excluded individuals exhibiting traits such as aggression (Buckley, Winkel, & Leary, 2004; Twenge, Baumeister, Stucke, 2001), self-regulation failure (Twenge, Catanese, & Baumeister, 2002), intellectual impairment (Baumeister, Twenge, & Nuss, 2002), impulsiveness (Baumeister, 2005),

and unwillingness to help others and/or cooperate (Twenge, Baumeister, DeWall, Ciarocco, Bartels, 2007). These consequences are due, in part, to the likelihood of being cut off from important information that may be available to others in a workgroup and more generally a lack of a social support system (Ellwardt, Labianca, & Wittek, 2012). Thus, although centrality in positive networks is likely to create conditions that are conducive to becoming embedded in the organization, employees who are central in negative networks are likely to feel socially excluded and subsequently lack the necessary conditions that would drive an individual to become embedded.

Hypothesis 2: Centrality in positive tie networks will be positively related to embeddedness (2a) and centrality in negative tie networks will be negatively related to job embeddedness (2b).

## Perspective Taking, Gender, Network Centrality, and Embeddedness

Although research on perspective taking suggests that it generally has a positive effect on one's network position, scholarship on gender bias indicates that gender can affect this process and potentially weaken the relationship between perspective taking and its ordinarily beneficial outcomes. Moreover, a large body of empirical research suggests that women tend to be more caring, people oriented, and better at taking on the perspective of others than men (e.g., Baron-Cohen & Wheelright, 2004; Davis, 1983; Eisenberg & Lennon, 1983; Mehrabian & Epstein, 1972).

Although more recent research has attributed gender differences in perspective taking to demand characteristics and methodological rigor, there is certainly a pervasive stereotype that the tendency to take on the perspective of others and demonstrate empathetic concern is associated with more feminine traits (Rueckert, 2011). For example, Hoffman (1977) found that women have a greater tendency to imagine themselves from the perspective of others, whereas men have more of a set toward instrumental ameliorative action (i.e., action based on viewing the other person as an object that can be manipulated). In a separate study using functional magnetic resonance imaging (fMRI), Singer, Seymour, O'Doherty, and Stephan (2006) found that perspective taking-related neural responses were much higher in women than men.

Meta-analytic research generally agrees with this stereotype, finding that women have a higher tendency to demonstrate empathetic concern, a consequent of perspective taking (Eisenberg & Lennon, 1983). However, these differences were only found when self-report scales were used, indicating that any gender differences in perspective taking and empathy are a function of the methods employed. Therefore, while findings are mixed, extant scholarship on perspective taking and empathetic concern provides a great deal of evidence to suggest that women may be more likely than men to take on the perspective of others and show empathetic concern.

Considering that women often find themselves walking a "tightrope" between being seen as too masculine or too feminine, it is possible that women who are high in perspective taking will fail to reap the same benefits as men and potentially be punished for demonstrating such a stereotypically feminine trait. Rudman and Glick (2001) support this notion, finding that women applying for managerial jobs are discriminated against when displaying traits that are seen as too communal (feminine). On the other hand, Heilman and Okimoto (2007) found that women are often penalized (i.e., disliked) for not be communal enough. Therefore, women who are seen as exhibiting attitudes or behaviors that are too far on either end of this narrow boundary condition

may face discrimination in the workplace and be seen as less fit for leadership roles (Rudman & Glick, 2001). As a consequent, it is likely that perspective taking will differentially affect men and women's feelings of embeddedness by either affording them greater opportunities to form enduring social bonds or inhibiting their ability to acquire such resources that are essential to well-being and performance.

Hypothesis 3: Gender will moderate the relationships of perspective taking and network centrality such that women who are high in perspective taking will be less central in positive networks (3a) and more central in negative networks (3b).

Hypothesis 4: Perspective taking will have a conditional indirect effect on embeddedness through a moderated-mediated relationship such that the interaction effect of gender and perspective taking will influence embeddedness through positive (4a) and negative (4b) network centrality.

#### **METHODS**

# **Participants and Procedures**

Working with senior leadership at a large bank in the mid-south, we identified a network of over 300 participants for an online survey. One hundred and seventy-nine of the original 300 participants were chosen for this study based on having exposure and influence beyond their respective business units and the opportunity to interact with others in the sample. Although all employees were encouraged to contribute, participation was voluntary. It is generally agreed that a 75 – 80% response rate is needed to conduct a valid analysis of a whole network. Thus at 84% our response rate was deemed acceptable. A survey was administered including demographic, attitudinal, behavioral, and sociometric (network) items. Participants worked primarily in leadership positions within different functional groups including sales, marketing, finance, accounting, operations, human resources, information technology, and general administration. Of the sample, 5.5% had been with the organization less than 3 years, 17.3% less than 5, 26.8% less than 7, 39.6% less than 10, 73.1% less than 20, 88.2% less than 30, and 100% less than 40. By race, 58.1% of participants were Caucasian, 35.2% African-American, 3% Asian/Pacific Islander, 2% Hispanic and 1.7% other. 51% of the participants were women, 49% were men and the average age of all participants was 46. All participants were notified that responses would remain confidential and that at no point in time would they be identified to anyone in the organization.

#### Measures

**Perspective Taking** was measured using an individual difference measure with seven items that consider the extent and frequency of which individuals attempt to view a situation from others' point of view (Davis, 1980). For example, "I try to look at everyone's side of a disagreement before I make a decision." Coefficient alpha for the seven-item scale was .80.

Global Job Embeddedness was measured with seven items assessing the extent to which an employee is tied to his or her organization through fit, links, and sacrifice (Crossley, Bennett, Jex, & Burnfield, 2007). A sample item is, "I am tightly connected to this organization." The reliability coefficient of the scale was .9.

Centrality in positive tie networks was measured by combining the in-degree centrality scores of participants in the advice and friendship networks, providing the extent to which these individuals are sought out for advice or friendship. A roster was provided to all respondents asking them to identify anyone who they have communicated with over the last six months. This timeframe was chosen by senior leadership based on expected frequency of communication within the organization (i.e., communication within the last six months identified meaningful interactions). Advice networks were measured by asking "Do you go to this person for work-related advice and knowledge?" (e.g., Krackhardt, 1990). Friendship networks were measured by asking "do you consider this person to be a close friend (e.g., confide in this person)?" (Brass, 1985). These data were assembled into two 149 X 149 cell matrices (one for each type of relationship) and the in-degree measure of each network was calculated using UCINET version 6.472 (Borgatti, Everett, & Freeman, 2002). In-degree scores for advice and friendship networks were then summed to create a centrality score for positive tie networks.

Centrality in negative tie networks. In line with past research (Labianca, Brass, & Gray, 1998), negative network centrality was measured by asking participants to answer the following question about each person they identified as someone they communicated with over the previous six months: "Do you consider this person as someone who 'de-energizes' you (i.e., you feel slightly drained after interaction with him/her). We then calculated in-degree centrality using UCINET version 6.472 (Borgatti, Everett, & Freeman, 2002) by looking at the number of individuals who indicated that the focal person is someone who de-energizes him or her.

Control variables. We controlled for several variables that have been shown to influence employees' attachment to the organization such as the respondents' race, age, job level (i.e., salary grade), and tenure (cf. Brush, Moch, & Pooyan, 1987).

#### **RESULTS**

# **Descriptive Statistics and Preliminary Analyses**

Table 1 provides descriptive statistics, reliability coefficients, and correlation coefficients for all variables. Consistent with standards established by Lance, Butts, and Michels (2006) and Nunnally (1978) our measures show strong internal reliability coefficients with alphas of .80 and .90. Examination of the variance inflation factors (VIF) show that multicollinearity is not a concern with all VIFs below five (Myers, 1990; Vogt, 2007).

We also conducted a confirmatory factor analysis (see Table 2) using the sample covariance matrix as input to LISREL 8.8 (Jöreskog and Sörbom 1996). The fit of the proposed measurement model was poor ( $\chi^2 = 1168.29$ , p = .00; df = 76; RMSEA = .1; NNFI = .9; CFI = .92; SRMR = .09) and not significantly better than a one-factor model ( $\chi^2 = 1168.29$ , p = .00; df = 77; RMSEA = .2; NNFI = .73; CFI = .77; SRMR = .16;  $\chi^2$  difference test is not significant). Upon further investigation, we found that all items in the proposed measurement model loaded highly as expected (.53 - .89), except for two negatively worded items in the perspective taking scale. Given the potential for confusion with negatively worded items and the relatively lower factor loadings, we omitted the two negatively worded items (retaining five items). The revised measurement model fit well ( $\chi^2 = 1090.57$ , p = .00; df = 52; RMSEA = .07; NNFI = .95; CFI = .96; SRMR = .07) and significantly better than a one-factor model ( $\chi^2$  difference test is significant at p < .0005). The revised perspective taking scale continued to exhibit good reliability ( $\alpha = .80$ ).

### **Regression Analysis**

We examined the hypotheses with a bootstrapping method by Preacher and Hayes (2007) to test for moderated mediation. This method reduces the number of tests needed, avoids making the unwarranted assumption of normality of the sampling distribution of the relative conditional indirect effect, and a growing body of evidence indicates that it performs well (Biesanz, Falk, & Savalei, 2010; Hayes & Scharkow, in press). Conditional indirect and interaction effects were calculated using estimated coefficients obtained by repeatedly sampling (using 10,000 bootstrap samples) from our original population of 179 and estimating the indirect and interaction effects in each resampled data set. Bias-corrected and accelerated confidence intervals were calculated to avoid issues with power that may arise when forced symmetry is imposed on ordinary confidence intervals and estimation inaccuracies associated with Type I errors.

A significant indirect effect is present when the 95% confidence interval does not include zero. As seen in Table 3, the mediation only model (i.e., no interaction effects) shows no significant results, with the exception of the relationship between positive network centrality and embeddedness. Specifically, based on the 10,000 bootstrap resample, the direct effects of perspective taking on positive and negative network centrality are not significant (.01, Bca 95% CI = -.17, .18; -.03, Bca 95% CI = -.19, .13). Therefore, Hypotheses 1a and 1b not supported. The direct effect of positive network centrality on embeddedness is significant (.02, Bca 95% CI = .00, .41) and the direct effect of negative network centrality on embeddedness is not significant (-.13, Bca 95% CI = -.35, .08). Therefore, hypothesis 2a is supported and hypothesis 2b is not supported. The indirect effects of perspective taking on embeddedness through positive and negative network centrality are not significant (.00, Bca 95% CI = -.03, .06; -01, Bca 95% CI = -.02, .06).

Table 4 represents the moderated mediation model. The interaction term of perspective taking and gender is significant when predicting positive network centrality (-.36, Bca 95% CI = -.7, -.01; for interaction plot see figure 1), but not when predicting negative network centrality (-.23, Bca 95% CI = -.56, .09). Thus, hypothesis 3a is fully supported and hypothesis 3b is not supported. When including the interaction term of gender and perspective taking, the conditional indirect effect of perspective taking on embeddednesss through positive network centrality is significant for females but not males (.-04, Bca 95% CI = -.12, -.00; .03, Bca 95% CI = -.00, .11) and the conditional indirect effect of perspective taking on embeddedness through negative network centrality is not significant for females or males (.02, Bca 95% CI = -.01, .12; -.01, Bca 95% CI = -.09, .01). Therefore, hypotheses 4a is supported and hypothesis 4b is not supported.

To further assess the extent to which women and men are differentially affected by their network position, we analyzed ego network composition using UCINET version 6.472 to assess whether or not men have a greater proportion of higher level ties in the organization. We used salary grade (i.e., 1-4, 1 being highest) as a proxy for level in the organization and found that men have a higher proportion of higher-level (i.e., level 1 & 2) ties than women (M = 40.21 and 33.80 ties, respectively). Further, we contrasted men and women based on the level of their ties using a one-way analysis of variance (ANOVA) with Tukey post-hoc analysis and found a significant difference between the two groups (p < .05). Using the same type of analysis (i.e., ANOVA), we contrasted men and women based on their levels of perspective taking and found no significant difference between groups. These results suggest that women, despite having similar levels of perspective taking as men, have fewer ties with employees holding more senior level positions in the organization.

#### DISCUSSION

We examined the relationship between perspective taking and embeddedness through a moderated mediated pathway involving gender and network centrality. Results indicate that although perspective taking is not directly related to network centrality or embeddedness, there is a significant interaction between perspective taking and gender when predicting positive network centrality. Figure 1 suggests that while men tend to benefit from high levels of perspective taking through higher centrality in positive networks, women with similar levels of perspective taking are less central in positive networks. Furthermore, positive network centrality is significantly related to embeddedness, indicating that a higher level of ties in a positive network helps to promote feelings of being enmeshed in the organization. As predicted, we did find a moderated mediated relationship such that perspective taking had a conditional indirect effect on embeddedness through positive network centrality with gender moderating the relationship between perspective taking and positive network centrality. These results, along with our ego composition analysis, suggest that women tend to have less social capital than men with fewer ties to high level employees and, more specifically, women who are high in perspective taking have fewer friends and fewer people who come to them for advice. Subsequently, they are less embedded and therefore more likely to exit the organization.

On the other hand, negative network centrality did not appear to be related to perspective taking or embeddedness. One explanation for this is that the average participant in our study had only one negative tie (i.e., one person who avoided him or her). It is possible that more negative ties exist, but we failed to capture them in our measurement. For example, a common way of measuring avoidance ties is by asking "sometimes people at work make us feel uncomfortable or uneasy and, therefore, we try to avoid interacting with them. Do you avoid interacting with this person" (Venkataramani et al., 2013; 1032). Our measure asked "do you consider this person as someone who 'de-energizes' you (i.e., you feel slightly drained after interacting with him/her)." Although research and theory indicates that negative ties can be emotionally and physically draining (Labianca & Brass, 2006; Labianca, Brass, & Gray, 1998), it is possible that this is only associated with extremely negative ties or people that others want to avoid to a high degree. Therefore, the former measure may better capture a broader array of negative ties in the organization.

#### **Theoretical Implications**

This research extends our knowledge and understanding of how and why employees stay with their organizations. Scholarship on interpersonal communication has long suggested that perspective taking plays an important role in romantic relationships. However, there has been an absence of research investigating the role of perspective taking in employment relationships. To our knowledge, this is the first study linking perspective taking to embeddedness through network centrality. We chose these variables because previous research suggests that perspective taking is likely to convey positive benefits in the form of social capital (e.g., Batson, 1991) and network centrality is related to employee withdrawal (Soltis et al., 2013). Establishing an empirical link between them has helped us to better understand the underlying and sequential processes that bring about feelings of embeddedness and offers unique opportunities to integrate management theory with scholarship on interpersonal communication and psychological theories aimed at explaining relationships within organizations.

Integrating job embeddedness theory with theory and scholarship on perspective taking and informal workplace social networks has aided us in explicating the relationship between how people view and act toward others – e.g., perspective taking promotes empathy toward others and limits bias since attributions about others' behavior become more positive and more in line with how people tend to view their own behavior – and their subsequent levels of embeddedness that come about as a result of the ties they form. Interestingly, research on gender bias indicates that men and women are not afforded the same opportunities when it comes to the outcomes they receive as a result of their behaviors and attitudes. Our work supports this notion, demonstrating that while perspective taking improves social capital among men, women are seemingly penalized for displaying what is often thought of as a feminine trait. As a consequent, women have fewer close bonds and may feel ostracized, socially excluded, and less embedded.

A second factor that may help to explain why women who are high in perspective taking are significantly less embedded than men is that they may feel a psychological contract (i.e., usually implicit, mutual expectations between an employer and employee) has been breached. For instance, we found that men have a disproportionately larger number of ties in the organization with higher-level employees, despite no significant difference existing in perspective taking between genders. Therefore, women generally have less access to these important resources and are seemingly punished when displaying the same type of attitudes and behaviors as men. This disparity between genders in outcomes relating to social capital and perspective taking seems to violate perceptions of fairness that are integral to psychological contracts. Put differently, at the heart of psychological contracts is the concept of equity, or the balance between what employees give to an organization and what they receive. According to Carrell and Dittrich (1978), employees who perceive inequity will attempt to reduce it through cognitive distortion or modifying inputs and outputs in their own mind. By feeling less embedded, female employees may be relieving some of the tension associated with their perceived inequities.

### **Practical Implications**

It is well established within the field of social psychology that perspective taking can help to promote and develop interpersonal relationships (Batson, 1991). Less is known about how it can help to promote more cohesive work environments and improve social bonds between colleagues. This work suggests that although perspective taking can benefit employees by improving their informal positions in organizations, it can hinder women from making close relationships that are vital to their well-being and access to resources. Managers can benefit from this research by educating employees on gender-bias and encouraging men and women to engage in positive behaviors regardless of their perceived connection to feminine or masculine traits. One way to perhaps identify when inequities exist is to analyze an organizations network to see who interacts with whom and the proportion of men and women connecting with ties at different levels of the organization. A higher proportion of higher-level ties among one gender may hint at the need for further investigation into this occurrence.

## **Limitations and Future Research**

This study was subject to several limitations that may limit the generalizability of our findings. First, as with most whole network studies, we were limited by the size of our

population and the number of items that could be included in our survey. Because participants were required to respond to every network item for everyone with whom they had interacted with in the last six months, expanding our sample would have likely led to increased attrition and required unacceptable time demands. Although the timeframe used in our study was driven by the expected occurrence of interactions in our sample, future research might benefit from utilizing a shorter time frame to include only recent interactions (e.g., who has interacted with whom in the last month?); thereby removing less critical ties from the study and allowing researchers to increase the overall sample size.

The second limitation in our study was the relatively small negative tie network. It is possible that we did not capture all negative ties in the sample and therefore missed opportunities to analyze the impact of perspective taking on embeddedness through negative network centrality. Although our aim was to promote open and honest feedback by our use of the term "de-energizing" rather than "avoid," extant research on informal workplace social networks suggests that there are other items that may better capture negative ties (e.g., Venkataramani et al., 2013). Future research would benefit from investigating this phenomenon and identifying optimal approaches to capturing these data.

### **CONCLUSION**

Our study advances research on how and why employees decide to stay with their organizations, utilizing a network perspective to highlight the impact of perspective taking on employees' feelings of embeddedness. We found that perspective taking has a conditional indirect effect on embeddedness through a moderated mediated pathway involving positive network centrality and gender. Importantly, we found that perspective taking typically conveys benefits to males in the form of more central positions in positive networks. However, women who are high in perspective taking are often penalized, holding less central positions in these same networks, and as a consequent they become less embedded. We hope this research helps to promote investigation into why employees stay and the role of gender and perspective taking in building cohesive work environments.

Our study advances research on how and why employees decide to stay with their organizations, utilizing a network perspective to highlight the impact of perspective taking on employees' feelings of embeddedness. We found that perspective taking has a conditional indirect effect on embeddedness through a moderated mediated pathway involving positive network centrality and gender. Importantly, we found that perspective taking typically conveys benefits to males in the form of more central positions in positive networks. However, women who are high in perspective taking are often penalized, holding less central positions in these same networks, and as a consequent they become less embedded. We hope this research helps to promote investigation into why employees stay and the role of gender and perspective taking in building cohesive work environments.

#### REFERENCES

- Allen, D. G. (2006). Do organizational socialization tactics influence newcomer embeddedness and turnover?. *Journal of Management*, 32(2), 237-256.
- Allen, D. G., Bryant, P. C., & Vardaman, J. M. (2010). Retaining talent: Replacing misconceptions with evidence-based strategies. *The Academy of Management Perspectives*, 24(2), 48-64.
- Adler, P. S., & Kwon, S. W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, 27(1), 17-40.
- Aron, A., Aron, E. N., Tudor, M., & Nelson, G. 1991. Close relationships as including other in the self. *Journal of Personality and Social Psychology*, 60: 241-253.
- Baron-Cohen, S., & Wheelwright, S. (2004). The empathy quotient: an investigation of adults with Asperger syndrome or high functioning autism, and normal sex differences. *Journal of Autism and Developmental Disorders*, 34(2), 163-175.
- Bartunek, J. M., Gordon, J. R., & Weathersby, R. P. (1983). Developing "complicated" understanding in administrators. *Academy of Management Review*, 8(2), 273-284.
- Baumeister, R. F. (2005). *The cultural animal: Human nature, meaning, and social life*. Oxford University Press.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497.
- Baumeister, R. F., Twenge, J. M., & Nuss, C. K. (2002). Effects of social exclusion on cognitive processes: anticipated aloneness reduces intelligent thought. *Journal of Personality and Social Psychology*, 83(4), 817.
- Bernstein, W. M., Stephan, W. G., & Davis, M. H. (1979). Explaining attributions for achievement: A path analytic approach. *Journal of Personality and Social Psychology*, *37*(10), 1810.
- Betancourt, H. 1990. An attribution-empathy model of helping behavior: Behavioral intentions and judgments of help-giving. *Personality and Social Psychology Bulletin*, 16: 573-591.
- Borgatti, S. P., Everett, M. G., & Freeman, L. C. (2002). Ucinet for Windows: Software for social network analysis.
- Brass, D. J. (1984). Being in the right place: A structural analysis of individual influence in an organization. *Administrative Science Quarterly*, 29(4).
- Brass, P. R. (Ed.). (1985). Ethnic groups and the state. Taylor & Francis.
- Brass, D. J., Butterfield, K. D., & Skaggs, B. C. (1998). Relationships and unethical behavior: A social network perspective. *Academy of Management Review*, 23(1), 14-31.
- Buckley, K. E., Winkel, R. E., & Leary, M. R. (2004). Reactions to acceptance and rejection: Effects of level and sequence of relational evaluation. *Journal of Experimental Social Psychology*, 40(1), 14-28.
- Burt, R. S. (1992). The social structure of competition. *Networks and organizations: Structure, form, and action*, *57*, 91.
- Cialdini, R. B., Brown, S. L., Lewis, B. P., Luce, C., & Neuberg, S. L. (1997). Reinterpreting the empathy–altruism relationship: When one into one equals oneness. *Journal of Personality and Social Psychology*, 73(3), 481.
- Crossley, C. D., Bennett, R. J., Jex, S. M., & Burnfield, J. L. (2007). Development of a global measure of job embeddedness and integration into a traditional model of voluntary turnover. *Journal of Applied Psychology*, 92(4), 1031.

- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*,44(1), 113.
- Davis, M. H., Conklin, L., Smith, A., & Luce, C. 1996. Effect of perspective taking on the cognitive representation of person: A merging of self and other. *Journal of Personality and Social Psychology*, 70: 713-726.
- Egan, G. 1990. *The skilled helper: A systematic approach to effective helping* (4<sup>th</sup> ed.). Pacific Grove, GA: Brooks-Gole.
- Eisenberg, N., & Lennon, R. (1983). Sex differences in empathy and related capacities. *Psychological Bulletin*, 94(1), 100.
- Eisenberger, N. I., Lieberman, M. D., & Williams, K. D. (2003). Does rejection hurt? An fMRI study of social exclusion. *Science*, *302*(5643), 290-292.
- Ellwardt, L., Labianca, G. J., & Wittek, R. (2012). Who are the objects of positive and negative gossip at work?: A social network perspective on workplace gossip. *Social Networks*, 34(2), 193-205.
- Freeman, L. C. (1979). Centrality in social networks conceptual clarification. *Social networks*, *1*(3), 215-239.
- Galinsky, A. D., & Moskowitz, G. B. (2000). Perspective-taking: decreasing stereotype expression, stereotype accessibility, and in-group favoritism. *Journal of Personality and Social Psychology*, 78(4), 708.
- Galinsky, A. D., Ku, G., & Wang, C. S. (2005). Perspective-taking and self-other overlap: Fostering social bonds and facilitating social coordination. *Group Processes & Intergroup Relations*, 8(2), 109-124.
- Galper, R. E. (1976). Turning observers into actors: differential causal attributions as a function of "empathy". *Journal of Research in Personality*, *10*(3), 328-335.
- Goleman, D. 1996. Emotional intelligence: Why it can matter more than I.Q. London: Bloomsbury.
- Grosser, T. J., Sterling, C. M., Scott, K. D., & Labianca, G. J. (2010). Social Networks, Groups, and Social Exclusion. *The* "dark" Side of Management, 143.
- Heilman, M. E., & Okimoto, T. G. (2007). Why are women penalized for success at male tasks?: the implied communality deficit. *Journal of Applied Psychology*, 92(1), 81.
- Hoffman, M. L. 1975. Developmental synthesis of affect and cognition and its implications for altruistic mo- tivation. *Developmental Psychology*, 11: 607-622.
- Hoffman, M. L. (1977). Sex differences in empathy and related behaviors. *Psychological Bulletin*, 84(4), 712.
- Holtom, B. C., & Inderrieden, E. J. (2006). Integrating the Unfolding Model and Job Embeddedness Model to Better Understand Voluntary Turnover. *Journal of Managerial Issues*, 18(4).
- Ibarra, H. (1992). Homophily and differential returns: Sex differences in network structure and access in an advertising firm. *Administrative Science Quarterly*, 422-447.
- Jones, E. E., & Nisbett, R. E. (1971). *The actor and the observer: Divergent perceptions of the causes of behavior* (p. 16). Morristown, NJ: General Learning Press.
- Krackhardt, D. (1990). Assessing the political landscape: Structure, cognition, and power in organizations. *Administrative Science Quarterly*, 342-369.

- Labianca, G., & Brass, D. J. (2006). Exploring the social ledger: Negative relationships and negative asymmetry in social networks in organizations. *Academy of Management Review*, 31(3), 596-614.
- Labianca, G., Brass, D. J., & Gray, B. (1998). Social networks and perceptions of intergroup conflict: The role of negative relationships and third parties. *Academy of Management Journal*, 41(1), 55-67.
- Lee, T. W., Mitchell, T. R., Sablynski, C. J., Burton, J. P., & Holtom, B. C. (2004). The effects of job embeddedness on organizational citizenship, job performance, volitional absences, and voluntary turnover. *Academy of Management Journal*, 47(5), 711-722.
- Long, E. C., & Andrews, D. W. (1990). Perspective taking as a predictor of marital adjustment. *Journal of Personality and Social Psychology*, *59*(10), 126.
- Mallol, C. M., Holtom, B. C., & Lee, T. W. (2007). Job embeddedness in a culturally diverse environment. *Journal of Business and Psychology*, 22(1), 35-44.
- Maslow, A. H., & Lowry, R. (1968). Toward a psychology of being.
- McPherson, J. M., & Smith-Lovin, L. (1987). Homophily in voluntary organizations: Status distance and the composition of face-to-face groups. *American Sociological Review*.
- Mead, G. H. 1934. *Mind, self and society*. Ghicago: University of Chicago Press.
- Mehrabian, A., & Epstein, N. (1972). A measure of emotional empathy. *Journal of Personality*, 40(4), 525-543.
- Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablynski, C. J., & Erez, M. (2001). Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal*, 44(6), 1102-1121.
- Mossholder, K. W., Settoon, R. P., & Henagan, S. C. (2005). A relational perspective on turnover: Examining structural, attitudinal, and behavioral predictors. *Academy of Management Journal*, 48(4), 607-618.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242-266.
- Parker, S. K., & Axtell, C. M. (2001). Seeing another viewpoint: Antecedents and outcomes of employee perspective taking. *Academy of Management Journal*, 44(6), 1085-1100.
- Payne, G. T., Moore, C. B., Griffis, S. E., & Autry, C. W. (2011). Multilevel challenges and opportunities in social capital research. *Journal of Management*, 37(2), 491-520.
- Piaget, J. 1932. The moral judgement of the child. London: Paul Kegan.
- Piaget, J., & Inhelder, B. 1968. The psychology of the child. New York: Basic Books.
- Pickett, C. L., Gardner, W. L., & Knowles, M. (2004). Getting a cue: The need to belong and enhanced sensitivity to social cues. *Personality and Social Psychology Bulletin*, 30(9), 1095-1107.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42(1), 185-227.
- Pruitt, D. G., & Rubin, J. Z. (1986). Social conflict: Escalation, impasse, and resolution. *Reding, MA: Addision-Wesley*.
- Putnam, R. D. (1995). Tuning in, tuning out: The strange disappearance of social capital in America. *PS: Political Science & Politics*, 28(04), 664-683.

- Regan, D. T., & Totten, J. (1975). Empathy and attribution: turning observers into actors. *Journal of Personality and Social Psychology*, 32(5), 850.
- Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues*, 57(4), 743-762.
- Rueckert, L., & Oyola, N. (2011). Gender differences in empathy. *Psychology of Empathy*, Nova Science Publishers, New York.
- Singer, T., Seymour, B., O'Doherty, J. P., Stephan, K. E., Dolan, R. J., & Frith, C. D. (2006). Empathic neural responses are modulated by the perceived fairness of others. *Nature*, *439*(7075), 466-469.
- Soltis, S. M., Agneessens, F., Sasovova, Z., & Labianca, G. J. (2013). A Social Network Perspective on Turnover Intentions: The Role of Distributive Justice and Social Support. *Human Resource Management*, 52(4), 561-584.
- Taylor, S. E. (1991). Asymmetrical effects of positive and negative events: The mobilization minimization hypothesis. *Psychological Bulletin*, *110*,67–85.
- Twenge, J. M., Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Bartels, J. M. (2007). Social exclusion decreases prosocial behavior. *Journal of Personality and Social Psychology*, 92(1), 56.
- Twenge, J. M., Baumeister, R. F., Tice, D. M., & Stucke, T. S. (2001). If you can't join them, beat them: effects of social exclusion on aggressive behavior. *Journal of Personality and Social Psychology*, 81(6), 1058.
- Twenge, J. M., Catanese, K. R., & Baumeister, R. F. (2002). Social exclusion causes self-defeating behavior. *Journal of Personality and Social Psychology*, 83(3), 606.
- Venkataramani, V., Labianca, G. J., & Grosser, T. (2013). Positive and negative workplace relationships, social satisfaction, and organizational attachment. *Journal of Applied Psychology*, 98(6), 1028.

# **TABLES AND FIGURES**

**Table 1** *Means, Standard Deviations, Correlations, and Reliability Estimates* 

Variable	M	SD	1	2	3	4	5	6	7	8
1. Perspective Taking	5.28	.85	(.8)							
2. Job Embeddedness	4.96	1.31	.09	(.9)						
3. Positive Network Centrality	26.03	16.36	.03	.23*						
4. Negative Network Centrality	1.05	1.66	03	08	.2* <mark>*</mark>					
5. Gender <sup>a</sup>	1.50	.50	09	17	0 <mark>1</mark>	04				
6. Age	46.30	9.00	.16	.07	.25 <mark>**</mark>	.13	07			
7. Race <sup>b</sup>	1.40	.49	.07	- <mark>.1</mark> 6	26 <mark>**</mark>	12	.16	03		
8. Salary Grade <sup>c</sup>	2.82	.92	17	11	56 <mark>**</mark>	22**	.25**	38**	.42**	
9. Tenure	15.29	10.54	.04	.14	.13	.04	.26**	.47**	.16	.01

*Note.* N = 148. Internal consistency reliabilities appear in parentheses along the diagonal.

Dummy coded: <sup>a</sup> 1 = male, 2 = female. <sup>b</sup> 1 = Caucasian, 2= Non-Caucasian. <sup>c</sup> 1-4, 1 being highest.

<sup>\*</sup>p < .05. \*\* p < .01

Table 2

# **Confirmatory Factor Analysis Results**

Scale Items	Standardized Loadings
<b>Job Embeddedness</b> (strongly disagree = 1 to strongly agree = 7)	
I feel attached to the organization.	.84
It would be difficult for me to leave this organization.	.89
I'm too caught up in this organization to leave.	.74
I feel tied to this organization.	.85
I simply could not leave the organization that I work for.	.66
It would be easy for me to leave this organization I	.52
I am tightly connected to this organization.	.73
Perspective Taking (strongly disagree = 1 to strongly agree = 7)	
Before criticizing someone, I try to imagine how I would feel if I were in their place.	.53
I try to look at everyone's side of a disagreement before I make a decision.	.62
I sometimes try to understand my friends better by imagining how things look from their perspective.	.77
I believe that there are two sides to every question and try to look at them both.	.75
When I'm upset at someone, I usually try to "put myself in his or her shoes" for a while.	.66
Two-Factor Model Fit Statistics. $X^2 = 1090.57$ , $p = .00$ ; $df = 52$ ; $RMSEA = .07$ ; $NNFI = .95$ ; $CFI = .96$ .07	6; SRMR =
One Factor Model Fit Statistics. $X2 = 1168.29$ , $p = .00$ ; $df = 77$ ; $RMSEA = .2$ ; $NNFI = .73$ ; $CFI = .77$	SRMR = .16

Note. All chi-square values are statistically significant at p < .05; df = degrees of freedom; RMSEA = root mean square error of approximation; NNFI = non-normed fit index; CFI = comparative fit index; SRMR = standardized root mean square residual.

**Table 3. Mediation Model**Direct and Indirect Effects of Perspective Taking on Embeddedness Through Network Centrality

Predictor Variables	Positive Network Centrality	Negative Network Centrality	Embeddedness			
Independent variable	$(a_1)$	$(a_2)$	(b <sub>1, 2</sub> )	(c')	$(ab_1)$	$(ab_2)$
Perspective Taking	.01	03		.08	.00	.01
Intervening mechanisms						
Positive Network Centrality			.20*			
Negative Network Centrality			14	Ju		

Note: DV=Embeddedness; 10,000 bootstrap samples;\*p < .05; (c') direct effect; (ab) indirect effect; control variables included age, race, job status, and tenure.

**Table 4. Moderated Mediation Model**Conditional Direct and Indirect Effects of Perspective Taking on Embeddedness Through Network Centrality Moderated by Gender

Predictor Variables	Positive Network Centrality	Negative Network Centrality		Embeddedn	ess	
Independent variable	$(a_1)$	$(a_2)$	(b <sub>1, 2</sub> )	(c')	$(ab_1)$	$(ab_2)$
Perspective Taking	01	04		.08		
Interaction terms						
Perspective Taking X Gender	36*	23				
Male					.03	01
Female					04*	.02
Intervening mechanisms						
Centrality in Positive Network			.20*			
Centrality in Negative Network			14			

Note: DV=Embeddedness; 10,000 bootstrap samples; \*p < .05; (c') conditional direct effect; (ab) conditional indirect effect; control variables included age, race, job status, and tenure.

Figure 1

Interaction of Perspective Taking and Gender on Positive Network Centrality

