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APPRECIATION THAT INSPIRES: THE IMPACT OF LEADER TRAIT GRATITUDE ON TEAM INNOVATION

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ABSTRACT

Although a leader's affective characteristics are believed to influence team processes and outcomes, the impact of leaders' discrete affective traits on team innovation remains unclear. This study addresses this issue by developing a multistage team-level model that explains how team leaders' trait gratitude enhances team innovation. Specifically, we draw on the other-praising perspective of gratitude to predict that leaders with trait gratitude tend to demonstrate humble behavior, which, in turn, promotes team voice and ultimately enhances team innovation. We also incorporate trait activation theory to theorize that leaders' perception of organizational support enhances the impact of trait gratitude on the leaders' humble behavior and its indirect effect on team innovation (via humble behavior and team voice). We found support for our research model using data of 71 teams collected from three sources in four phases. This study offers important insights into how and when leaders with high trait gratitude can foster team innovation and advances the existing gratitude research in the team context.

Keywords: humble behavior, leader trait gratitude, perceived organizational support, team innovation, team voice

INTRODUCTION

Team innovation, or the generation and implementation of novel and useful ideas, products, processes, and procedures in teams (West & Farr, 1990), is critical for the growth and competitiveness of today's organizations. Therefore, fostering innovation in teams has become a top priority for many leaders, and studies linking leaders' characteristics to team innovation are theoretically and practically important (Hughes et al., 2018). In particular, leaders' affective characteristics have been considered important predictors of leaders' behavior and team functioning (Joseph et al., 2015). Some scholars found that leaders' dispositional tendencies to experience positive or negative emotions influenced team processes (e.g., decision making style; Barsade et al., 2000) and outcomes (e.g., team service performance; George, 1995). Others showed that leaders' display of positive and negative affect also predicted team performance (e.g., Seong & Choi, 2014). However, little research has examined the effect of leaders' discrete affective traits (i.e., leaders' dispositional tendency to experience a specific emotion; Barsade & Gibson, 2007), other than global positive/negative affect, on team innovation. Due to their stability and specificity, discrete affective traits can exert prolonged and idiosyncratic influence on leaders' behavior and team processes that are pertinent to innovation. Lack of this research may prevent us from establishing a nuanced understanding of the central role of leader characteristics in promoting team innovation.

To address this issue, we identify leader trait gratitude, which refers to one's stable dispositional tendency to “recognize and respond with grateful emotion to the roles of other people's benevolence in the positive experiences and outcomes that one obtains”

(McCullough et al., 2002, p. 112), as particularly relevant to team innovation. Team innovation, by its very nature, is a product of collective endeavor which requires inputs from multiple team members (Alexander & van Knippenberg, 2014; van Knippenberg, 2017). To achieve team innovation, it is crucial for team leaders to engage members' talents and knowledge and to recognize their contribution (e.g., He et al., 2020). Leaders with higher trait gratitude are likely to seek and value others' contribution. This is because the other-praising tendency of trait gratitude enables these leaders to think less about themselves and focus more on others' positive qualities (Algoe & Haidt, 2009) and "to recognize that their capabilities are limited—that is, to acknowledge that they cannot 'go it alone' to achieve their goals" (Ruberton et al., 2016, p. 265). We focus on leaders' trait gratitude given that this affective trait and its associated other-praising tendency are well aligned with the requirement for joint contribution inherent in team innovation.

To offer valuable insights regarding how and when leaders' trait gratitude can enhance team innovation, we further identify the manifestation of the other-praising tendency and draw on trait activation theory to examine under which circumstances this impact is stronger or weaker. We propose leaders' humble behavior as a behavioral expression of their trait gratitude that promotes team members' voice and ultimately enhances team innovation. Owing to the other-praising tendency, trait gratitude redirects an individual's focus from the self to others, thus exhibiting humble behavior which is characterized by "acknowledging personal limits, faults, and mistakes, spotlighting followers' strengths and contributions, and modeling teachability" (Owens & Hekman, 2012, p. 794). Leaders' humble behavior creates opportunities for team members to

provide input by proactively making suggestions for improvement (i.e., team voice; MacKenzieet al., 2011; van Dyne & LePine, 1998), which then benefits team innovation. Moreover, drawing upon trait activation theory (Tett & Burnett, 2003; Tett & Guterman, 2000), we argue that trait gratitude will likely manifest in humble behavior when individuals perceive gratitude-relevant cues (e.g., Fredrickson, 2004; van Kleefet al., 2010). Specifically, leaders' perceived organizational support (POS)—their perception that "the organization values their contributions and cares about their well-being" (Eisenberger et al., 1986, p. 501)—informs leaders that they are beneficiaries in their organizations (Ford et al., 2018) and is thus laden with cues relevant to trait gratitude. Hence, it can strengthen the effect of leader trait gratitude on humble behavior and its indirect effect on team innovation. Our theoretical model is depicted in Figure 1.

Insert Figure 1 about here

Our study offers important contributions to the literature. First, we expand the research on leaders' influence on team innovation. Bydemonstrating the utility of a leader discrete affective trait in shaping team innovation, we address the call for innovation research to explore the role of leaders' traits in this process (Hughes et al., 2018). We also contribute to the team innovation literature by suggesting that in addition to using active leadership (e.g., transformational leadership and empowering leadership; Jiang & Chen, 2018; Tang et al., 2020), possessing trait gratitude, hence exhibiting humble behavior, is an important way in which team leaders can promote members' proactive

voice behavior and subsequent team innovation. Second, we broaden the literature on leader affective characteristics by focusing on leaders' trait gratitude and examining leaders' humble behavior and team voice as serial mediators that represent the other-praising tendency of gratitude. Our research extends the work on leaders' positive and negative affective characteristics (e.g., Barsade et al., 2000; Seong & Choi, 2014) by explicating how a discrete affective trait enables leaders to encourage their team members to innovate via the unique other-praising mechanism. Third, by incorporating trait activation theory to theorize leaders' POS as a moderator that activates the behavioral expression of leaders' trait gratitude, our research advances the understanding of the boundary condition of trait gratitude in organizational context and offers insights regarding how organizations may support their leaders, especially those with high trait gratitude, to promote team innovation. Finally, in linking leaders' trait gratitude to team process and innovation, our study creates an avenue for trait gratitude research to uncover the role of gratitude in work teams.

THEORY AND HYPOTHESES

Trait gratitude refers to a person's predisposition to experience gratitude emotion and can make people feel frequent and intense thank- fulness for a wide range of gratitude-stimulating events (McCullough et al., 2001, 2002). Unlike the short-term, experienced or expressed gratitude emotion that is triggered by specific events and fluctuates across time and situations (Emmons & McCullough, 2003), a person's trait gratitude is a stable dispositional tendency (McCullough et al., 2002). It is shaped by both hereditary and environmental factors, such as genes, childhood experiences,

parenting styles, and surrounding social culture (e.g., Algoe & Way, 2014; Emmons & Crumpler, 2000; Liu et al., 2017; Steger et al., 2007), and its formation is generally determined by long-term, persistent interventions and significant life events. Therefore, trait gratitude is relatively enduring and is not likely to change drastically for an adult within a short period. Owing to these features, trait gratitude has great potential to influence leaders' motivation and behavioral style and subsequently affects team processes and innovation (DeRue et al., 2011; Joseph et al., 2015).

An Other-Praising Perspective of Trait Gratitude

Trait gratitude can "draw people out of themselves" (Algoe & Haidt, 2009, p. 23), making people focus on others' positive qualities and attribute their own success to those who contribute to their achievements directly or indirectly (e.g., Haidt, 2003; McCullough et al., 2002). These features of trait gratitude are captured by its other-praising tendency (Algoe & Haidt, 2009), with which people tend to recognize and appreciate others' contributions and external help that guide them in overcoming their limitations and achieving goals (Armenta et al., 2017; Haidt, 2003). Empirically, trait gratitude has been shown to be negatively related to pathological narcissism and envy (McCullough et al., 2002; Solom et al., 2017), thereby suggesting a tendency of low self-superiority and high appreciation of others' strengths.

We argue that this other-praising perspective differs from the often-studied prosocial perspective of gratitude and is particularly suit- able for explaining why team leaders with trait gratitude can spark team innovation. The prosocial perspective indicates

a person's tendency to directly give back to others who have benefited them or even uninvolved third parties (Ma et al., 2017; Wood et al., 2010) to "maintain the well-being and integrity of others" (Brief & Motowidlo, 1986, p. 710). In the work context, the prosocial tendency enables leaders with trait gratitude to provide resources to improve followers' well- being (Michie, 2009). The other-praising perspective, instead, reflects one's tendency to focus on others' exemplary actions and involves genuinely recognizing others' strengths and encouraging others to participate and contribute (e.g., Algoe & Haidt, 2009; Ruberton et al., 2016), which is beyond tit-for-tat or reciprocity inherent in the prosocial tendency. In the context of leadership and team innovation, the other-praising tendency of trait gratitude enables leaders to gain a better understanding of members' values and thus more effectively involve their team members in the innovation process. To showcase the unique effect of the other-praising tendency on team innovation, we empirically controlled for the mediating effect of the prosocial tendency of gratitude in the form of leaders' prosocial behavior.

In the following sections, we apply the other-praising perspective to theorize that leaders' trait gratitude is positively related to their humble behavior. Next, we propose that leaders' POS serves as a moderator that strengthens the leader trait gratitude–humble behavior relationship. We then explicate the impact of leader humble behavior on team voice, which, in turn, affects team innovation. Finally, we present the overall moderated mediation model.

Leader Trait Gratitude and Humble Behavior in a Team Context

Leaders' humble behavior includes three key elements: “(a) a manifested willingness to view oneself accurately, (b) a displayed appreciation of others' strengths and contributions, and (c) teachability” (Owens et al., 2013, p. 1518). Although previous stud- ies have connected gratitude to either humility or humble behavior (e.g., Emmons, 2006; Kruse et al., 2014; Ruberton et al., 2016), our study is among the first to examine this relationship in the workplace, especially in the team context, by focusing on leaders' trait gratitude and their demonstration of humble behavior. We argue that leaders' trait gratitude, with its other-praising tendency, increases leaders' humble behavior toward their team for three reasons.

First, people with high trait gratitude are likely to see others' value, accept their limitations, and keep their ego in check (Chancellor & Lyubomirsky, 2013; Ruberton et al., 2016). In a team context where members have different strengths and talents, leaders with trait gratitude tend to recognize that these members' positive qualities serve as critical complements to their own incapability and weaknesses and can therefore curb their egoistic attitudes, actions, and judgment, which is a key element of being humble at work (e.g., Owens et al., 2013).

Second, people with trait gratitude see themselves as beneficiaries of others' actions (McCullough et al., 2001, 2002) and acknowledge their dependence on and connection with others (Emmons & McCullough, 2003). Scholars have suggested that trait gratitude implies humble behavior because grateful people recognize that others' contributions are critical to their achievements and well-being (e.g., Emmons, 2006; Kruse et al., 2014). For example, Algoe and Haidt (2009) argued that individuals with

trait gratitude consider themselves part of something bigger than themselves and thus tend to develop an awareness of others' strengths and value. As a result, team leaders with high trait gratitude may demonstrate humble behavior because they genuinely recognize that they rely on the team members' contributions to make progress.

Third, dispositionally grateful people appreciate a wide range of learning experiences, regard them as teachable moments, and learn from them (e.g., Fredrickson, 2001; Fredrickson & Joiner, 2002). These people let go of their defensive mindset and engage in a broaden-and-build process (Fredrickson, 2001, 2004) by expanding their scope of attention and thought–action repertoires. They also uti- lize resources and opportunities for building their own competence and improving themselves (Armenta et al., 2017). In a team context where leaders need input from their team members, those leaders with high trait gratitude tend to be teachable because they know their limits (e.g., Haidt, 2003; Ruberton et al., 2016) and are open to new ideas and feedback from their members (Owens et al., 2013; Owens & Hekman, 2012). Taken together, we propose:

Hypothesis 1. Leaders' trait gratitude is positively related to their humble behavior toward their team members.

Moderating Effect of Leaders' Perceived Organizational Support

Although we predict that leaders with high trait gratitude tend to exhibit humble behavior in their work teams, personality theorists argue that the extent to which one's personal characteristics will predict the manifested behavior also depends on whether the situation includes trait-relevant cues that justify the expression of that trait (e.g., Tett

& Burnett, 2003). Specifically, trait activation theory focuses on the relevance of a situation to a specific trait. Tett and Burnett (2003, p. 502) posited that "a situation is relevant to a trait if it is thematically connected by the provision of cues, responses to which (or lack of responses to which) indicate a person's standing on the trait."

Drawing on this perspective, we identify leaders' POS as a factor with trait gratitude-relevant cues. POS is a relatively stable perception developed through accumulated experiences of fair organizational procedures, high-quality supervisor support, adequate organizational rewards, and favorable job conditions (Rhoades & Eisenberger, 2002). Employees often attribute supportive and helpful treatment received at work to the benevolence of their organizations (Eisenberger et al., 1986; Sluss & Ashforth, 2008). High POS indicates leaders' positive interactions with their organizations (e.g., the organization pro- vides support and aid to one's job) and denotes a situation in which leaders view themselves as beneficiaries in these interactions and appreciate the contributions of their organizations to their own achievement or well-being (Ford et al., 2018; Hu & Kaplan, 2015). POS thus contains salient cues that relate to the expression of trait gratitude. Moreover, trait activation theory posits that the expression of certain personality in a relevant situation is an intrinsically rewarding experience (Tett & Burnett, 2003; Tett & Guterman, 2000). Therefore, leaders with trait gratitude are motivated to respond positively to a supportive environment that is likely to be considered as a realm for them to exhibit their "true selves."

In this regard, POS can activate leaders' other-praising tendency of their trait gratitude and strengthens the association between their trait gratitude and humble behavior. First,

with a high POS, contextual cues such as the assistance of others (e.g., organizational rewards, job condition, or colleagues) can be easily detected by leaders with trait gratitude and enable them to recognize themselves as beneficiaries of the organization (Ford et al., 2018). A high POS makes leaders with trait gratitude realize that beyond their intrapersonal resources, a broader external support from their organizations plays a critical role in helping them maintain a good standing in the workplace. Therefore, high POS enables leaders with trait gratitude to gain an accurate self-awareness of their limits and thus exhibit humble behavior.

Second, with high POS, organizations provide respect and care that meet leaders' social–emotional needs, such as approval, esteem, and affiliation (Eisenberger et al., 1986), thereby strengthening the connections of these leaders with their organizations and other organizational participants. As such, a high POS helps leaders with trait gratitude to consolidate their sense of social connectedness by developing positive views toward their team members and seeing these members as integral parts of their team or organizational effectiveness. This enhanced connectedness motivates these leaders to recognize their dependence on the team members, value their strengths, and show greater appreciation for their contributions, thereby leading to humble behavior.

Third, receiving support from the organization may remind leaders about the external input that can bring them the necessary resources for improving their work outcomes, making them more coachable and motivating them to improve themselves out of the desire to prove that they deserve their organizational support (Eisenberger et al., 1986). In this way, a high POS facilitates a broaden-and-build process (Fredrickson,

2001, 2004) whereby leaders with trait gratitude pay attention to others' feedback and contributions and utilize these resources for self-learning and self- improvement.

By contrast, in case of low POS when the situation lacks salient gratitude-relevant cues, leaders' trait gratitude is less likely to manifest in humble behavior. We also expect that leaders' humble behavior will occur not only in their interactions with or on behalf of their organizations but also in their interactions with their team members. As suggested by Wood et al. (2010, p. 892), the influence of trait gratitude "applies more widely than simply through the recognition and reciprocation of interpersonal aid; with gratitude drawing attention to the perception of anything to appreciate in the world." Taken together, we hypothesize:

> Hypothesis 2. Leaders' POS moderates the relationship between their trait gratitude and humble behavior such that this relationship is stronger when leaders' POS is higher.

Leaders' Humble Behavior and Team Voice

In capturing the implication of the other-praising tendency of leaders' trait gratitude, we further propose that leaders' humble behavior can promote team voice, which is defined as team members' collective engagement in making constructive suggestions or expressing ideas and concerns about work-related issues (MacKenzie et al., 2011). We argue that leaders' humble behavior can enhance team voice via the three motivational mechanisms of proactivity: (a) can do (i.e., whether members perceive that they have the capability of engaging in proactive behavior), (b) reason to (i.e., whether members find

intrinsic rea- sons to engage in proactive behavior), and (c) energized to (i.e., whether members have enough energy to make things happen) (Parker et al., 2010).

First, leaders' humble behavior signals high levels of teachability, which evokes a can-do mechanism for team voice. By showing their willingness to learn, leaders encourage their team as a whole to proactively look for areas to improve and find ways to address them. According to Lin et al. (2019), given that humble leaders prioritize learning and growth, employees believe that they can "influence the leader's attentions, and endorsement for their opinions and suggestions" (p. 938), thereby are motivated to speak up. In addition, humble leaders' openness to different opinions and suggestions (Owens & Hekman, 2012) creates a safe environment for their team members to speak up without fear of repercussions for challenging the status quo (e.g., Detert & Trevino, 2010).

Second, leaders' humble behavior reflects high levels of self- awareness and secure sense of self, which develop a reason-to mechanism for team voice. Humble leaders who are aware of their own strengths and weaknesses tend to acknowledge their limitations in decision making and problem solving (e.g., Owens et al., 2013). Given their modest view of themselves, these leaders are willing to invite their team members to contribute and express their ideas and concerns for improving team effectiveness. Under such circumstances, team members tend to initiate and involve in voice behavior due to their discretion and intrinsic motivation (Sheldon & Elliot, 1998).

Third, by displaying humble behavior, leaders show an appreciation for their team

members' strengths and contributions and emphasize other-valuation, which can energize team members in their collective engagement in voice (Wang et al., 2018). In other words, by exhibiting humble behavior, team leaders identify and value the unique capabilities of their team members and make them feel respected and energized in interpersonal and team interactions. Emotional energy is important for team members' engagement in voice given its role in creating a positive environment for speaking up (Liu et al., 2015) and in prompting them to persistently seek challenges and improvement (Wu & Wang, 2015). Based on the above reasoning, we propose:

Hypothesis 3. Leaders' humble behavior is positively related to team voice.

Team Innovation as a Distal Outcome

Team voice is a meaningful vehicle for team innovation that reflects a proactive process where all team members' talents and expertise are utilized. Especially, team voice can shift members' attention to issues that need improvement and broaden the problem space that helps them spot issues that are peripheral to their attention and thinking (e.g., Li et al., 2017). As team members extensively make suggestions to each other, the chance of utilizing available knowledge to generate new solutions to the problems at hand is increased (Liang et al., 2019). Moreover, when implementing novel ideas, frequent team voice enables the team to come up with alternative implementation strategies, identify potential problems in application processes, and exchange practical suggestions to smooth those procedures to gain more "targeted employees' appropriate and committed use of an innovation" (Klein & Sorra, 1996, p. 1055). In addition, team voice reflects collective participation in decision making in

which team members jointly shape the direction for change (Guzman & Espejo, 2019). It strengthens the team's commitment to implementing new ideas and plans. As such, team voice not only gives rise to new ideas but also fosters the implementation of these ideas. Empirically, Li et al. (2017), Liang et al. (2019), and Guzman and Espejo (2019) reported a positive association between team voice and team innovation. We hypothesize:

Hypothesis 4. Team voice is positively related to team innovation.

Overall, by building on the other-praising perspective of gratitude, we hypothesize that leaders with high trait gratitude tend to exhibit humble behavior, which invites their members to engage in team voice, a team process that helps spark team innovation. Further draw-ing on trait activation theory, we propose that the indirect effect of leader trait gratitude on team innovation is strengthened when leaders' POS is high.

Hypothesis 5. Leaders' POS moderates the indirect effect of leader trait gratitude on team innovation through leaders' humble behavior and team voice such that the indirect effect is stronger when leaders' POS is higher.

METHOD

Sample and Procedure

We collected our data from team members, team leaders, and team directors (team leaders' supervisors) from various companies in major cities in Southeastern China. These companies were from different industries including transportation, energy, medicine, banking, retail, and so forth. With the help of human resource

managers from these companies, trained research assistants conducted preliminary inter- views to identify teams that shared collective goals and whose collective effort could significantly influence the delivery of their final service or products. We then collected data at four time points with a 2-week interval between each time point. Our time-lagged and multisource design helped reduce the concern of common method variance (Podsakoff et al., 2012). Our choice to use 2-week intervals is in line with previous research on leader humility and team performance (Owens & Hekman, 2016) and studies on leaders' dispositions and humble behavior (as rated by followers; Owens et al., 2015; Wang et al., 2018). Moreover, given that data were collected from different companies to maximize the generalizability of our findings, a longer data collection period may introduce uncontrollable variations, such as changes in membership in team functioning.

Initially, we reached out to 102 teams (with a total of 378 members) to invite their participation in the study. At Time 1, 90 of 102 team leaders provided their trait gratitude, POS, and demo- graphics. At Time 2, we invited all members in the 90 teams to participate in the study. A total of 321 members from the 90 teams rated their leaders' humble and prosocial behaviors. At Time 3, 284 team members from 71 teams rated their team voice. At Time 4, we reached out to 54 upper-level directors of the 71 teams and asked them to evaluate their teams' innovation by answering a short paper survey.

The final matched sample comprised 284 members from 71[1] teams in 48 companies, with the majority of the teams coming from different companies. Overall

response rates were 70% and 75% for team leaders and team members, respectively. Each team had 3–7 members (with an average of 4), and their response ratios within teams ranged from 75% to 100%. We excluded those teams with two or fewer members who responded in any round of data collection to reduce selection bias (Timmerman, 2005). Among these team members, 55% were female, the average age was 29 years, 92% had a college or higher degree, and the average job tenure was 4.8 years. Among the team leaders, 56% were female, the average age was 36 years, 96% had a college or higher degree, and the average job tenure was 10 years.

Measures

All measures were translated from English to Chinese and then back translated to English by a panel of bilingual experts following the procedure recommended by Brislin (1970). Any resulting discrepancies were discussed and resolved (see the Appendix A for the items used). All items were rated on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Leaders' trait gratitude. At Time 1, the team leaders self-evaluated their trait gratitude using the 6-item scale developed by McCullough et al. (2002). This measure was designed to assess individuals' dispositional tendency toward gratitude. The Cronbach's alpha for leaders' trait gratitude was .79.

Leaders' POS. At Time 1, the team leaders rated their perceptions of organizational support using the 8-item scale of Eisenberger et al. (1986). The Cronbach's alpha for this scale was .87.

Leaders' humble behavior. At Time 2, leaders' humble behavior was measured using the 9-item scale developed by Owens et al. (2013). This scale assessed team members' perceived humble behavior of their leaders. The Cronbach's alpha for leaders' humble behavior at the individual level was .90. To assess the overall pattern of leader behavior displayed to the entire group, we calculated within-group agreement ($R_{wg(j)}$) and intraclass correlations (ICC1 and ICC2). The mean value of $R_{wg(j)}$ for leaders' humble behavior based on a uniform null distribution in the expected variance was .94, which was above the cut-off point of .70 (Bliese, 2000). We kept four teams with $R_{wg(j)}$ values below .70 (.55, .63, .68, and .66, respectively) on this variable to avoid reducing our sample size. The ICC1 and ICC2 values were .38 and .71, respectively (F (70, 213) = 3.46, $p < .01$). Supported by these results, we aggregated the team members' ratings of their leaders' humble behavior to the team level.

Team voice. At Time 3, the team members reported team voice using a 3-item scale adapted from van Dyne and LePine (1998) with a referent-shift model. The Cronbach's alpha for team voice was .70. To aggregate this rating to the team level, we obtained a mean $R_{wg(j)}$ value of .92 based on the uniform null distribution in the expected variance. We also kept three teams with $R_{wg(j)}$ values below .70 on this variable (.50, .60, and .60 for these teams) on this variable to avoid reducing our sample size. The ICC1 and ICC2 values were .16 and .45, respectively (F (70, 213) = 1.78, $p < .01$). Although we had a moderate ICC2 for team voice ratings, aggregating this rating to the team level was justified as we obtained high values of $R_{wg(j)}$ and ICC1 and significant F test results for the group effect (Chen & Bliese, 2002). Aggregation was also applied in previous

team studies that obtained similar ICC2 values (e.g., Chiu et al., 2016).

Team innovation. At Time 4, the team directors were asked to rate their team's innovation using three items from de Dreu (2002, 2006). The Cronbach's alpha for team innovation was .79.

Control variables. We controlled for team size because it was revealed to be related to leader behaviors and can influence team members' interactions and their innovative performance (e.g., Eisenbeiss et al., 2008; Jiang & Chen, 2018). Team average dyadic tenure (i.e., the average tenure between team members and their leader) was controlled because previous studies have shown that it might affect team processes related to innovation (e.g., Schippers et al., 2003). Team leaders' gender and education levels were also controlled because they were found to affect team members' perception of their leaders' behaviors as well as how these leaders influenced team processes and team innovation (Jiang et al., 2015; Tang et al., 2020). To examine the unique effect of the other-praising perspective of gratitude, we included leaders' prosocial behavior as an alternative mediator. Leaders' prosocial behavior was measured at Time 2 using the 4-item scale developed by Barbuto and Wheeler (2006). The Cronbach's alpha of this scale was .72. The leaders' prosocial behavior was conceptualized as a leader-level construct. We obtained an $R_{wg(j)}$ value of .94, an ICC1 of .41, and an ICC2 of .74 (F (70, 213) = 3.81, $p < .01$), which justified the aggregation of this variable to the team level.

Analytical Strategy

Although team directors rated the innovation of multiple teams, we ran an analysis of variance (ANOVA) test and found no significant differences in their ratings ($F = 1.28$, $df_{(between)} = 53$, $df_{(within)} = 17$, $p = .30$). Therefore, we analyzed our data at the team level. To test the hypothesized model, we ran an integrated team-level path-analytic model in Mplus 8.3 to perform a unified test of the mediation and moderation effects. Compared to the piecemeal approach, this integrated approach does not require multiple stages of analysis and generates less biased estimates (Preacher et al., 2011). We did not use latent variables in our modeling due to the relatively small size of our sample. We estimated our model by using an maximum likelihood (ML) estimator with a bootstrapping approach in Mplus.[2]

RESULTS

Multilevel Confirmatory Factor Analysis

Before testing our hypotheses, we conducted a series of multilevel confirmatory factor analyses (MCFA) to determine the distinctiveness of our leader- and member-rated variables (i.e., leaders' trait gratitude, POS, humble behavior, prosocial behavior, and team voice). We excluded team innovation because this variable was rated by directors outside of the team. We used parcels to indicate latent variables that had five or more items. Given that leaders' trait gratitude and POS are unidimensional constructs, we followed the procedures recommended by Bagozzi and Edwards (1998) to create three parcels for trait gratitude and four parcels for POS by averaging the highest loading item with the lowest loading one, the second highest loading item with the second lowest loading one, and so on. Given that leaders' humble behavior is a multidimensional latent

construct, we formed three parcels as indicators based on the three conceptual dimensions. Using parcels is appropriate in MCFA because "when thoughtfully composed, parcels provide efficient, reliable and valid indicators of latent construct" (Little et al., 2013, p. 285). We tested a model in which leaders' trait gratitude and POS were treated as team-level factors because they were rated by leaders. Meanwhile, leaders' humble behavior, prosocial behavior, and team voice were treated as team- and individual-level factors. As shown in Table 1, compared to a number of alternative models, our hypothesized model had better fit to the data (χ^2 (141) = 148.91, CFI = 0.99, TLI = 0.99, RMSEA = 0.01, SRMR $_{(within)}$ = 0.02, SRMR $_{(between)}$ = 0.07), thereby supporting the distinctiveness of the key variables in this study.

Insert Table 1 about here

Descriptive Statistics and Correlations

Table 2 presents the descriptive statistics, reliabilities, and correlations of all variables.

Insert Table 2 about here

Hypothesis Testing

Table 3 summarizes the unstandardized coefficients of our model. To properly estimate the proposed indirect effects from leader trait gratitude to team innovation, we controlled for several direct effects in our model, including the paths from leader

trait gratitude to both team voice and team innovation, the paths from leaders' humble behavior to team voice and innovation, and the paths from leaders' prosocial behavior to team voice and innovation. Team leaders' gender and education level, team size, and members' average dyadic tenure with team leader were included to predict leaders' humble and prosocial behaviors, team voice, and team innovation. We also included the interaction effect of leader trait gratitude and POS on both humble and prosocial behaviors. Results showed that our model fit the data better (ML-χ^2 (4) = 1.35; RMSEA = .00; CFI = 1.0; TLI = 1.0; SRMR = .02) than a model in which the interaction effect of leader trait gratitude and POS on leaders' humble and prosocial behaviors was fixed to 0 (ML-χ^2 (6) = 10.25; RMSEA = .10; CFI = .94; TLI = .68; SRMR = .06) ($\Delta\chi^2$ = 8.9, df = 2, p < .05).

Insert Table 3 about here

Hypothesis 1 proposed a positive relationship between leaders' trait gratitude and leaders' humble behavior. Table 3 shows that this relationship was significantly positive (B = .35, p < .001), supporting Hypothesis 1.

Hypothesis 2 predicted an interaction effect between leaders' trait gratitude and POS on their humble behavior. We found that the interaction effects of leader trait gratitude and POS positively predicted leaders' humble behavior (B = .26, p < .0). We then used the Johnson–Neyman technique to provide an analysis of the moderated relationship and plot the band of significance for effect of leaders' trait gratitude on their humble behavior

at various values of POS (Gardner et al., 2017; Preacher et al., 2006). We identified regions of leaders' POS values at which the relation of leaders' trait gratitude and humble behavior was significantly different from zero. We plotted the upper and lower limits of a 95% confidence interval (CI) for the moderating effect of leader POS. As illustrated in Figure 2, the effect of leaders' trait gratitude on humble behavior was positive and significant when the mean-centered value of leaders' POS reached -.70 or higher, which provided support for Hypothesis 2.

Insert Figure 2 about here

Hypothesis 3 proposed a positive association between leaders' humble behavior and team voice, which was supported by our results ($B = .36$, $p < .01$). Hypothesis 4 predicted a positive association between team voice and team innovation. Our results showed a significant relationship between team voice and innovation ($B = .77$, $p < .001$), thereby supporting Hypothesis 4.

We also conducted bootstrapping (resampling 5000 times) in Mplus to test the conditional indirect effects. Bootstrapping results showed that the indirect effect of leader gratitude on team innovation via leaders' humble behavior and team voice was significant and stronger at high levels of POS (indirect effect = .14, 95% bias-corrected CI = [.04, .34], excluding zero) than at low levels (indirect effect = .05, 95% bias-corrected CI = [.005, .15], excluding zero), supporting Hypothesis 5. We then used Johnson–

Neyman technique and plotted the upper and lower limits of a 95% CI for the moderating effect of leader POS on this indirect effect. Figure 3 shows that the indirect effect was positive and significant when the mean-centered value of leaders' POS reached -.80 or higher. Therefore, we found support for Hypothesis 5.

Insert Figure 3 about here

In addition, Table 3 shows that leader trait gratitude was positively related to leaders' prosocial behavior (B = .29, p < .01). How- ever, we did not find significant interaction effect between leader trait gratitude and POS on prosocial behavior (B = .16, p > .05), which suggested that POS may not intensify the effect of trait gratitude on prosocial tendency responses in terms of prosocial behavior. We also did not observe a positive relationship between prosocial behavior and team voice (B = .07, p > .05), which was consistent with our theory. To test the robustness of our findings, we estimated an alternative model by excluding leaders' prosocial behavior as a control mechanism. The alternative model showed a good fit (ML-χ^2 4) = 1.4; RMSEA = .00; CFI = 1.0; TLI = 1.0; SRMR = .02), and results for the hypotheses test remained the same.

DISCUSSION

We investigated how and when leaders' trait gratitude promotes team innovation, a collective process that requires less egoistic leader behavior and more collaborative initiatives from employees. By collecting data from three sources at four phases, we found that leaders with high trait gratitude were more likely to engage in humble behavior, which elicited team members' voice and ultimately fostered team innovation.

We also found that leaders' POS moderated the effect of leader trait gratitude on their humble behavior and ultimately on team innovation such that these effects became stronger when leaders perceived high levels of organizational support.

Theoretical Implications

Our study offers important contributions to the literature on team innovation, leader affective characteristics, and gratitude. First, we expand the research on leaders' influence on team innovation by identifying leaders' trait gratitude as an important antecedent of team innovation. Hughes et al. (2018) called for studies on creativity/ innovation to "[s]upplement or move beyond the focus on leader styles to explore the effects of leader characteristics such as traits" (p. 564). Accordingly, recent work has started to investigate how leaders' regulatory traits (e.g., regulatory mode, Li et al., 2018; affect regulation tendency, Madrid et al., 2016) can drive team innovation. Extending this research, we showed that leaders' trait gratitude, as a discrete affective trait, can also boost team innovation via the serial mediation of leader humble behavior and team voice. Moreover, the team innovation literature has generally considered active leadership styles (e.g., transformational leadership, Eisenbeiss et al., 2008; Jiang & Chen, 2018; empowering leadership, Lee et al., 2018; Tang et al., 2020) to be critical for team members to exchange and integrate their perspectives to innovate (van Knippenberg, 2017) because those leaders actively offer specific expectations, directions, and/or guidance. Complementing this perspective, our research indicates that alternatively, by acknowledging their own limitations and encouraging team members' influence, team leaders with trait gratitude can effectively motivate members' own proactivity to make contribution (e.g., by proactively challenging the status quo and bringing constructive change) to team innovation.

Second, our study contributes to the literature on leader affective characteristics. Although scholars have offered insights into the impact of leaders' general positive and negative affect at multiple levels (e.g., Delgado-García & de la Fuente-Sabaté, 2010; George, 1995; Johnson, 2008), Joseph et al. (2015) pointed out in their meta-analysis that there is a "paucity of primary studies examining discrete trait emotions" (p. 563). Moreover, prior research has mostly examined the effect of leaders' affective

characteristics from an emotional contagion perspective (i.e., leaders' emotional experiences influence the team's experience of similar emotions) or an affect-as-information perspective (i.e., leaders' emotional experiences serve as contextual information that guides the team's responses). By introducing an other-praising mechanism of leader trait gratitude, our study uncovers a new influence process of leaders' affective characteristics. We suggest that rather than shape the team's emotional experience or offer cognitive resources to team members, leaders' trait gratitude has a motivational impact as these leaders tend to recognize and appreciate others' inputs. Our findings that humble behavior, but not prosocial behavior, was positively associated with team voice and innovation when both were included in the model show the explanatory power of the other-praising mechanism above the prosocial mechanism, extending the notion that leaders with high trait gratitude influence follower outcomes primarily by exhibiting prosocial behavior (Ma et al., 2017; McCullough et al., 2002).

Third, by incorporating trait activation theory, our study highlights the role of leaders' POS in boosting the behavioral expression of leaders' trait gratitude. Specifically, we found that leaders' POS strengthened the impact of leader trait gratitude on their humble behavior and its indirect impact on team innovation. While POS is often shown to serve as a gratitude-arousing factor that can induce employees' state gratitude at work (Ford et al., 2018; Hu & Kaplan, 2015), our findings suggest that for leaders with high trait gratitude, POS can activate their other-praising tendency and motivate them to encourage collective innovative contributions from all team members. In this sense, the benefits of offering organizational support to leaders are not limited to a reciprocal exchange between leaders and organizations (e.g., Eisenberger et al., 2001). Rather, it can help leaders with high trait gratitude to elicit the proactivity of their team as a whole and boost team innovation.

Finally, our findings expand the understanding of trait gratitude in the leadership and team contexts. While previous studies have mainly examined the effect of gratitude on an individual's subjective well- being and relationship building (e.g., Algoe et al., 2008; Ma et al., 2017), scholars have recently emphasized the benefits of gratitude

in the workplace on a broad type of outcomes at different levels (e.g., Fehr et al., 2017; Hu & Kaplan, 2015). For example, empirical studies demonstrated that state gratitude can shape an employee's or a leader's behavior at work (Ford et al., 2018; Grant & Gino, 2010), that a team's state gratitude can promote team creativity (Pillay et al., 2020), and that gratitude practices in organizations can help improve organizational effectiveness (Cameron et al., 2011). We expand the scope of this emerging research by employing a dispositional lens on leaders' trait gratitude and unveiling its implications in the process of leading teams and driving team innovation.

Practical Implications

In today's volatile and complex environment, leaders have increasingly relied on their teams to come up with new ideas and bring innovative changes (Griffin et al., 2007; Tang et al., 2020). Therefore, our findings provide valuable practical implications about which leaders and when those leaders can boost team innovation by showing that team leaders with trait gratitude tend to "create … an environment where others could shine" and are "privileged to find treasure within others and put it to good use" (Bennis, 2005, pp. xi–xii).

Specifically, our findings indicate that leader trait gratitude matters in catalyzing leaders' humble behavior, which further improves team voice and innovation. These positive relationships provide an additional assessment criterion for the selection and development of effective leaders in today's organizations. For example, when assigning future leaders, organizations may look for candidates with high trait gratitude given that these individuals have the predisposition to develop into humble leaders who can promote team voice and foster team innovation.

Moreover, our findings suggest that organizations can promote leaders' humble behavior, especially for leaders with high trait gratitude, by offering them support. Signaling to leaders that the organizations are concerned about their well-being will increase the chances for their trait gratitude to manifest in humble behavior. Providing organizational support is less intrusive (and perhaps less offensive) than requiring humility training in motivating leaders to be humble without pressing them to appreciate

others. Offering organizational support to leaders with high trait gratitude can also naturally and genuinely promote their other-praising tendency, thereby preventing a situation where leaders pretend to be humble in response to the demands of their organizations.

Limitations and Future Research Directions

Our work has several limitations that point to future research directions. First, we were unable to conclusively examine the causal relationships among our variables or to examine the dynamic impact of leader trait gratitude. While acknowledging these limitations, our theorizing of leader influence process from leaders' characteristics (i.e., trait gratitude) to leader behavior (i.e., humble behavior) and then to team process (i.e., voice) and team outcomes (i.e., team innovation) was consistent with the integrative trait-behavior model of leadership effectiveness (DeRue et al., 2011) and the literature on the proximal and distal antecedents to leader effectiveness (van Iddekinge et al., 2009). Interestingly, we found that leader trait gratitude was related to leaders' behavior but not to team variables, showing the validity of the proposed theoretical chain. We also suggest that reversed relationships are unlikely in our study. For example, team voice and innovation are less likely to trigger changes in leaders' hum- ble behavior or trait gratitude because team experiences may not be stable and enduring enough to continuously stimulate specific pat- terns of attitudinal and behavioral responses and to trigger personality change (Wrzus & Roberts, 2017). Although we are confident in our theory-driven relationships and measured each variable in the serial mediation at a different time, we believe that a longitudinal design in which each key variable is measured multiple times would be valuable in testing the potential dynamic and reciprocal relationships in our model.

Second, our examination of leaders' trait gratitude in the team context, together with previous studies on team state gratitude and its role in facilitating favorable team functioning (e.g., Pillay et al., 2020; Seong & Choi, 2014), suggests that it will be interesting for future studies to investigate the interplay between state and trait gratitude among both leaders and team members. For example, leaders' trait gratitude,

when aligned with team members' trait gratitude, may create leader–team fit or trigger strong collective gratitude emotions such that team members are willing to engage in more pro-active behaviors and innovative activities. Moreover, extending our findings on the importance of leaders' trait gratitude in teams, future research should examine the impact of other discrete affective characteristics such as joy, anxiety, anger (e.g., Visser et al., 2013) on team processes and innovation, as well as their associated influence mechanisms.

Third, although our research demonstrated the moderating role of leaders' POS, we encourage future research to identify other situational factors that can boost the positive effect of trait gratitude at work. For example, support at the interpersonal level, such as help from colleagues, may enhance the other-praising tendency of leaders with high trait gratitude. This extension can inform an interpersonal mechanism that may strengthen the effect of trait gratitude in contrast to the perceived organizational supported identified in this study. Future studies should also examine whether the support from other life domains (e.g., family support) can serve the same function. Additionally, it would be valuable to examine how event-level organizational, interpersonal, or family support can enhance a grateful person's experience of gratitude on a daily basis in the workplace. Others' ratings or objective measures may be used to assess support-related variables when possible (e.g., high-involvement human resource systems, peer relationships, and family support) to further our theory.

Finally, our findings were based on a Chinese sample, which may raise concerns about the generalizability of these findings across cultures. For instance, one may argue that team leaders from different cultures have a systematically different level of trait gratitude and/or exhibit different levels of humble behaviors due to their cultural values. However, we noticed that the means of our variables were comparable to those found in previous studies that used samples from other countries. For example, leaders' humble behavior in our sample had a mean of 3.88 out of 5, which was comparable to those in previous studies using samples from Western countries (e.g., a mean of 3.84 in Owens et al., 2013; a mean of 3.92 in Rego et al., 2017). Nevertheless, given that our study is the first to examine the link between leaders' trait gratitude and team innovation, future

studies should cross-validate our findings by using samples from other cultures.

Conclusion

By integrating an other-praising perspective with trait activation theory, our study unpacked the impact of leaders' trait gratitude in a team context. Using multisource data collected over four periods, we found that leaders with high trait gratitude can spark team innovation by exhibiting humble behavior and promoting team voice, especially when they perceive high organizational support. This study offers important evidence to support the central role of leaders' trait gratitude in fostering team innovation and motivates researchers to examine other key team-level outcomes of discrete affective traits in the workplace.

ENDNOTES

1. There were two teams with Rwg(j) values below .60 for at least one of the three aggregated variables: leaders' humble behavior, prosocial behavior, and team voice. We excluded these two teams and reran our analysis with 277 members from 69 teams. The results were virtually identical. To avoid reduction in the sample size, we reported the results using the sample of 71 teams.
2. We also estimated the same model by using an MLR (estimator = MLR) and a Bayesian estimator (estimator = Bayes) in Mplus, which is suitable for a small sample size. We obtained virtually identical results that lead to the same conclusions.

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Table 1: Results of Multilevel Confirmatory Factor Analysis of Member-Rated Study Variables

Models	Factors	χ^2	*df*	$\Delta\chi^2$over Model 1	SRMR (within)	SRMR (between)	RMSEA	CFI	TLI
1	5-factor: Leaders' trait gratitude; Leaders' POS; Leaders' humble behavior; leaders' prosocial behavior; team voice	148.91	141		.02	.07	.01	.99	.99
2	4-factor: Combining leaders' trait gratitude and POS	209.67	145	60.76**	.02	.14	.04	.94	.93
3	4-factor: Combining leaders' humble behavior and prosocial behavior	241.51	147	92.60**	.06	.10	.05	.91	.89
4	4-factor: Combining leaders' humble behavior and team voice	220.74	147	71.83**	.04	.10	.04	.93	.92
5	4-factor: Combining leaders' prosocial behavior and team voice	198.74	147	49.83**	.04	.11	.04	.95	.94

$N = 284$. ** $p < .01$

Table 2: Means, Standard Deviations, and Correlations

Variables	*M*	*S.D.*	1	2	3	4	5	6	7	8	9
1. Leader Gender (T1)	.56	.50									
2. Leader Education (years) (T1)	16.31	1.13	-.09								
3. Team size	4.00	.63	-.05	.14							
4. Team Average Dyadic Tenure (T2)	2.67	1.83	-.02	.06	-.09						
5. Leader Trait Gratitude (T1)	3.99	.65	-.05	-.32**	.08	-.05					
6. Leaders' POS (T1)	3.75	.66	-.07	-.14	-.06	.13	.36**				
7. Leaders' Humble Behavior (T2)	3.88	.50	.12	-.26*	.08	.02	.37**	.04			
8. Leaders' Prosocial Behavior (T2)	3.42	.53	-.12	-.05	.29*	-.31**	.33**	.06	.43**		
9. Team Voice (T3)	3.90	.43	-.13	-.21	.01	-.17	.29**	-.01	.47**	.34**	
10. Team Innovation (T4)	3.61	.79	.33**	.01	.02	.04	.05	-.01	.03	.03	.24*

Note. $N = 71$ teams. Leaders' POS = Leaders' perceived organizational support. Gender: 0 = male, 1 = female. * $p < .05$. ** $p < .01$.

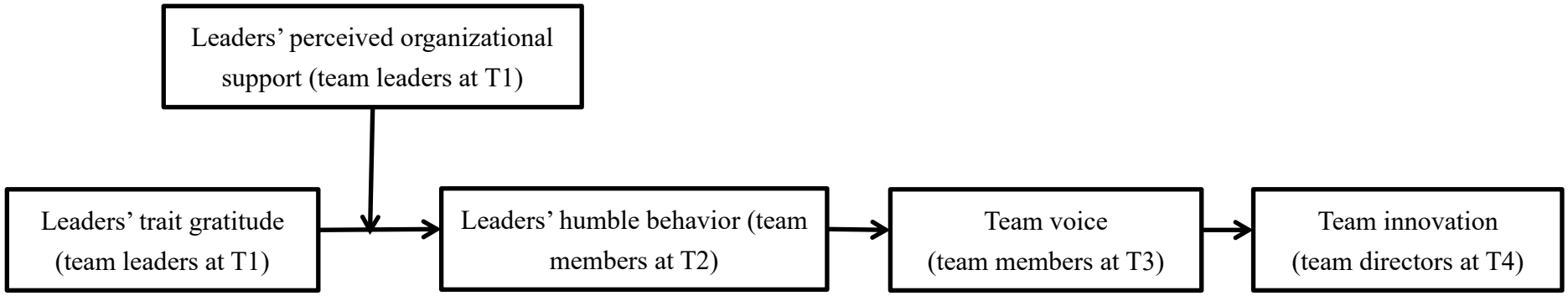
Table 3: Unstandardized Coefficients of the Model Results (With Prosocial Behavior as a Control)

	Leaders' Humble Behavior		Leaders' Prosocial Behavior		Team Voice		Team Innovation	
Predictor	**B**	**SE**	**B**	**SE**	**B**	**SE**	**B**	**SE**
Controls								
Leader Gender	.18	.11	-.07	.11	-.15	.10	.69***	.19
Leader Education	-.08	.05	.00	.05	-.03	.04	.05	.10
Team Size	.04	.13	.18*	.09	-.05	.08	.04	.13
Team Average Dyadic Tenure	.04	.03	-.07*	.03	-.04	.03	.07	.05
Independent Variable								
Leader Trait Gratitude	.35***	.08	.29**	.11	.05	.08	.06	.20
Moderator								
Leaders' POS	-.04	.08	.02	.09				
Interaction								
Leader Trait Gratitude * Leaders' POS	.26**	.10	.16	.14				
Mediators								
Leaders' Humble Behavior					.36**	.12	-.41	.24
Leaders' Prosocial Behavior					.07	.10	.11	.20
Team Voice							.77***	.21
R^2	.28**	.08	.30**	.10	.31**	.12	.25**	.09

Note. $N = 71$ teams. Leaders' POS = Leaders' perceived organizational support. Gender: 0 = male, 1 = female. B = unstandardized coefficients. SE = standard error. We tested several alternative models with different combinations of leader and team demographic control variables and obtained similar results for our main hypotheses.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 1. Hypothesized Model



Note. The raters and the time point at which the variables were measured are enclosed in parentheses in each box

Figure 2. Regions of significant for the conditional relationship between leaders' trait gratitude and humble behavior as a function of leaders' POS at a 95% confidence level

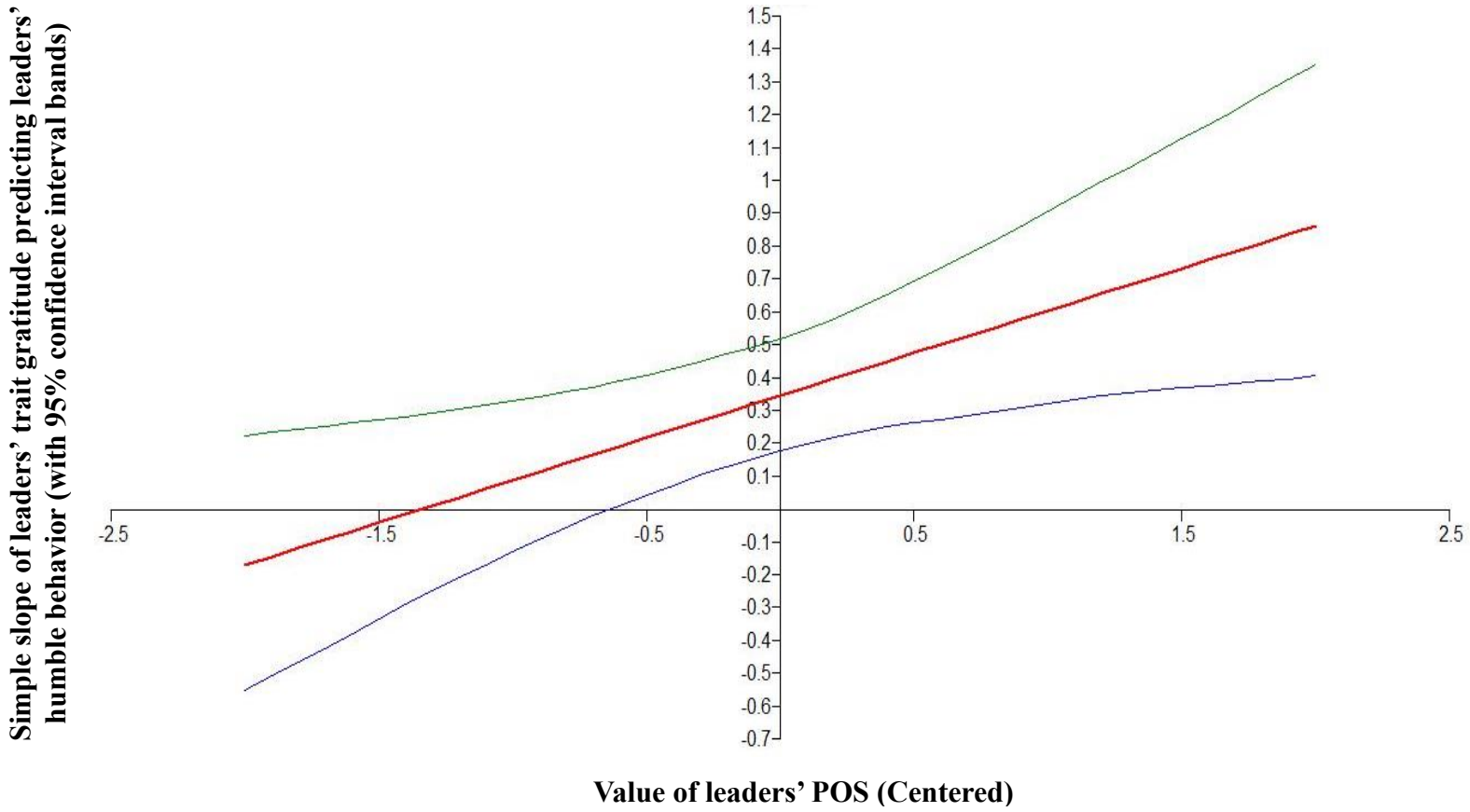
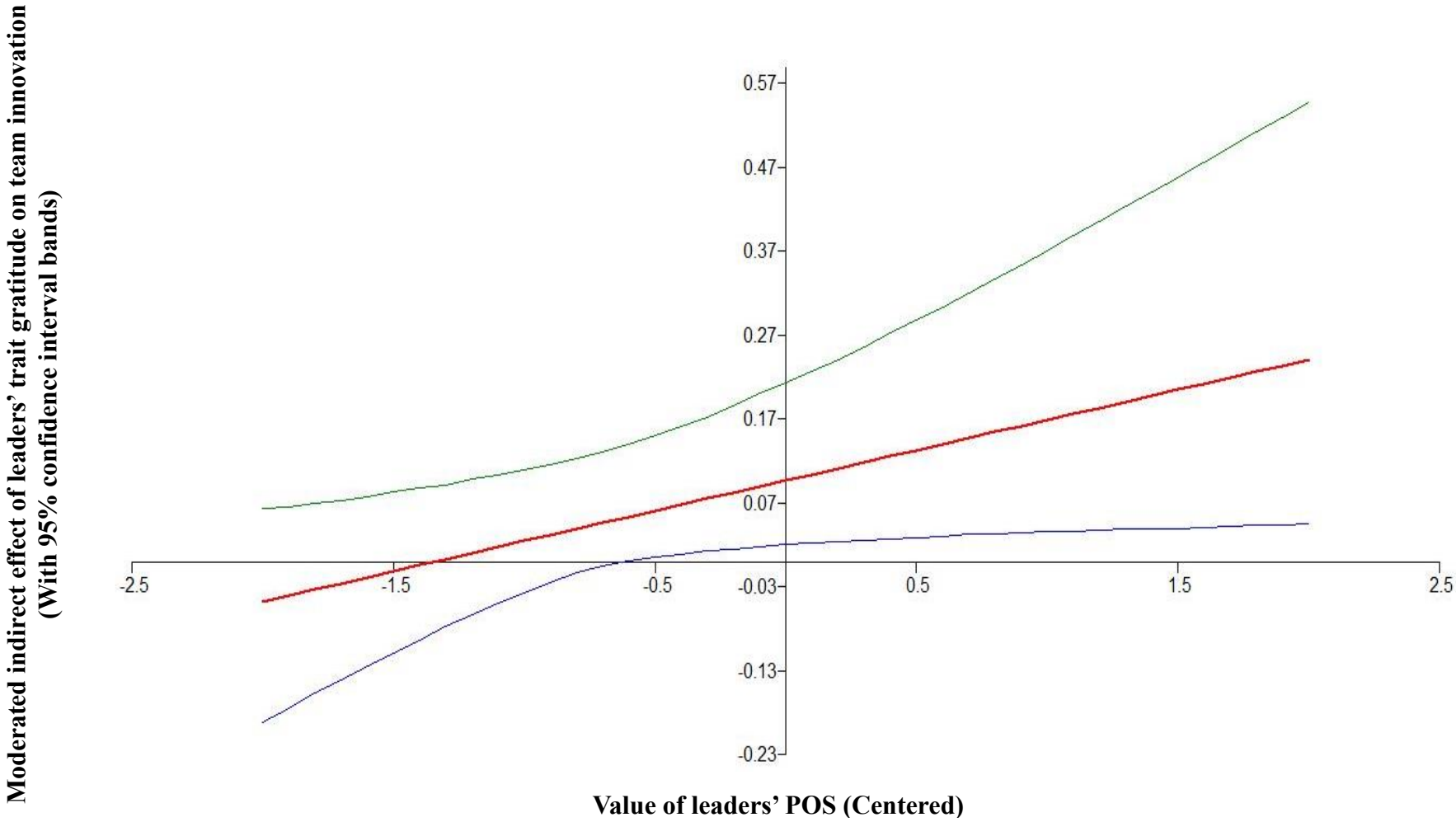


Figure 3. Regions of significant for the conditional relationship between leaders' trait gratitude and team innovation as a function of leaders' POS at a 95% confidence level



Appendix: Items of the Main Variables in the Study

Leaders' trait gratitude (McCullough et al., 2002):

(1) I have so much in life to be thankful for.
(2) If I had to list everything that I felt grateful for, it would be a very long list.
(3) When I look at the world, I don't see much to be grateful for. (R)
(4) I am grateful to a wide variety of people.
(5) As I get older, I find myself more able to appreciate the people, events, and situations that have been part of my life history.
(6) Long amounts of time can go by before I feel grateful to something or someone. (R)

Leaders' perceived organizational support (Eisenberger et al., 1986)

(1) The organization shows great concern for me.
(2) The organization values my contribution to its well-being.
(3) The organization appreciates extra effort from me.
(4) The organization would not ignore any complaint from me.
(5) The organization really cares about my well-being.
(6) The organization cares about my general satisfaction at work.
(7) The organization takes pride in my accomplishments at work.
(8) The organization would notice that I did the best job possible.

Leaders' humble behavior (Owens et al., 2013)

(1) Team leader actively seeks feedback even if it is critical.
(2) Team leader admits it when they don't know how to do something.
(3) Team leader acknowledges when others have more knowledge and skills than him or herself.
(4) Team leader takes notice of others' strengths.
(5) Team leader shows appreciation for the unique contributions of others.
(6) Team leader often compliments others on their strengths.
(7) Team leader shows willingness to learn from others.
(8) Team leader is open to the ideas of others.
(9) Team leader is open to the advice of others.

Leaders' prosocial behavior (Barbuto & Wheeler, 2006)

(1) Team leader puts my best interests ahead of his/her own.
(2) Team leader goes above and beyond the call of duty to meet my needs.
(3) Team leader does everything he/she can to serve me.
(4) Team leader sacrifices his/her own interests to meet my needs.

Team voice (van Dyne & LePine, 1998)

(1) The members of my work group develop and make recommendations concerning issues that affect the group.
(2) The members of my work group speak up and encourage others in the group to get involved in issues that affect the group.

(3) The members of my work group communicate their opinions about work issues to others in the group even if their opinion differs and if others in the group disagree with them.

Team innovation (de Dreu, 2002, 2006)

(1) This team often implements new ideas to improve the quality of products and services.
(2) This team often produces new services, methods, or procedures.
(3) This team gives a lot of consideration to new and alternative methods and procedures for doing their work.