

Investigating the effect of leader humility on subordinates' service creativity: a moderated dual path model

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Abstract

Humility has been found to produce a host of positive behavioral outcomes among employees, but there is also evidence that the impact of leader humility is constrained by team-level factors. Integrating social learning theory and social exchange theory, this research investigated how and when leader humility facilities versus inhibits subordinate service creativity by developing a moderated dual path model. Employing path analysis with 348 samples of valid data in service industry, the study revealed that leader humility positively affects role modeling, LMX, and subordinate's service creativity. Notably, team relationship conflict negatively moderates the relationship between LH and role modeling, while positively moderates the relationship between LH and role modeling, and social exchange in understanding leader humility, but also helps to deepen managers' cognition of the application value of humble behavior in improving employees' service creativity.

Keywords Leader humility · Role modeling · LMX · Team relationship conflict · Service creativity

Introduction

A man's pride shall bring him low, but honour shall uphold the humble in spirit. — **Proverbs** 29:23.

Humility is regarded as an admirable personality trait that emerges in social settings, which involves (a) a willingness to take an objective and accurate look at oneself, (b) an appreciation of the merits and advantages of others, and (c) an openness to new ideas and things (Owens et al., 2013). In recent years, more and more managers advocate using humility as an administrative tool to improve employees' job satisfaction, performance, and OCB (Owens & Hekman, 2016; Wang et al., 2019). Notably, successful leaders in a commercial organization often employ humility to obtain the support of others, motivate their followers, and create value for the organization in various aspects (Yam et al., 2018; Yang et al., 2020). Meanwhile, leaders who are open, optimistic, and humble can not only build closer relationships with their followers, but also become potential role models for them in the workplace (Brown & Treviño, 2014). The above research provides some evidence for the positive influence of leader humility, but existing research on the effect of leader humility on follower' creativity is still scarce and fragmented (Hu et al., 2018).

Creativity is associated with generating and practicing ideas and solutions that are novel and useful within the organization (Zhou & George, 2001; Sok et al., 2018). Service creativity mainly focuses on how to "surprise" customers and deals with customer problems in unconventional ways (Zeng et al., 2012). Existing research shows that increased service creativity can improve service quality, customer satisfaction and customer loyalty (Zeng et al., 2012; Dong et al., 2015; Yang et al., 2021). Therefore, managers in service enterprises are eager to know how to inspire and motivate the creativity of service personnel at the lowest cost (Yang et al., 2021). Nevertheless, existing literature still does not provide a complete and clear answer to this issue. To address this issue, this study integrated two streams of literature on leader humility to examine the possibility of leaders as a key conduit of employee creativity.

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Leader humility (LH) has been confirmed to produce a host of positive behavioral outcomes among employees. For instance, Wang et al. (2018) theorized how leader humility can enhance followers' performance by increasing their relational energy and decreasing their emotional exhaustion. Ye et al. (2020) revealed that leader humility exerts its impact on team humility, which in turn influences employee creative performance. In recent years, scholars have begun to explore the influence of leader humility on team level, such as team humility (Owens & Hekman, 2016; Ye et al., 2020), collective team psychological capital (Rego et al., 2019), and team creative efficacy (Wang et al., 2019). However, previous research mainly interprets leader humility from a single perspective, which is too fragmented to accurately understand the impact of leader humility on employees and teams. Therefore, the primary propose of this research is to integrate social learning theory and social exchange theory to explain the association between LH and employee service creativity. On the one hand, employees view their immediate superiors as role models because of their formal or informal power. This is consistent with social learning theory, which holds that individuals consciously or unconsciously observe, learn, and emulate the behavior of role models in interpersonal interaction. On the other hand, in the frequent work interaction, an exchange relationship will be formed between leaders and subordinates. Social exchange theory points out that leader's behavior is an extremely important antecedent for the formation and strengthening of LMX relationship (e.g., Yam et al., 2018; Qin et al., 2020).

In addition, in order to completely understand the boundary condition of the two theories, this paper introduced team relationship conflict as a moderator. Existing documents on leadership have demonstrated that the leader-level factors affect the effectiveness of the leader behavior, such as leadership style (e.g., narcissism; Owens et al., 2015), leader-member relationship (Carnevale et al., 2019). However, research about the impact of team-level factors on the effectiveness of leader humility is relatively scarce. Recently, some scholars suggested the work team characteristics affect the relationship between leadership and followers' creativity (Chen et al., 2019; Modranský et al., 2020), such as team relationship conflict. Chen et al. (2011) found that team relationship conflict would reduce the psychological empowerment and affective commitment of team members, thus inhibiting their innovative behaviors. However, Ye et al. (2020) found that in a high competitive climate, the humility of team leaders will promote subordinate creative performance. As such, the impacts of team relationship conflict on effectiveness of leader humility remains to be further explored. To sum up, the research questions of this paper are: (1)How does LH affect subordinates' service creativity? What are the mediation mechanisms? (2) When different mechanisms work together, which one is dominant? (3) What is the boundary condition of the research model?

This study makes fourfold contributions. First, the current study, to our knowledge, is one of the first to empirically attempt to integrate and reconcile these different humility theory, making a significant contribution to the leadership and humility literature. And, this study tests the positive effect of leader humility on service creativity, which is a positive response to the work of Hu et al. (2018) and Owens et al. (2019). Second, the present research contributes to the role model literature by extending the discussion on the causes of role modeling. Based on the perspective of team learning, this study found that the humble behavior of leaders would establish and strengthen the subordinates' perception of role modeling of leaders, thus generating a positive association with the innovative behavior of subordinates. Third, the present research contributes to the literature on LMX in leader humility. This study reveals a positive association between leader humility and LMX, which echoes and supplemented the current LMX literature on leader humility, such as Qin et al. (2020). Last, this research enriches the boundary condition of the effectiveness of leader humility. This research introduces team relationship conflict, a group-level psychological variable, as a moderator and examined its effect on the effectiveness of leader humility. Specifically, TRC strengthens the effect of LH on LMX, but weakens the effect of LH on role modeling. This finding reveals the doubleedged sword role of TRC in the process of leader humility enhancing subordinates' creativity, which enriches the TRC literature.

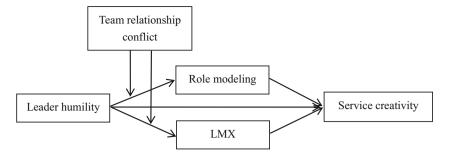
The second section further explores the relationship between LH and employee service creativity, while developing a dual mediation assumption that links LH and improved subordinates' creativity through role modeling and LMX (the hypothetical model is set out in Fig. 1). We then test the hypothetical model by using data from ten service enterprises in China. The discussion then proceeds to argue that the proposed consequence is stronger/weaker at different levels of TRC before a moderated dual-mediation model is set out in more detail. Finally, this paper conclude by demonstrating how our research makes an important practical and theoretical contribution to the literature on LH and subordinates' creativity.

Literature Review and Hypotheses Development

Leader Humility and Subordinate Behavior

Humility has been referred to as a remarkable and excellent quality characterized by "being more humble, modest, respectful, down-to-earth and open-minded rather than arrogant,

Fig. 1 Conceptual model



self-centered or conceited" (Peters et al., 2011, p.155). Immanuel Kant regarded humility as a "meta-attitude, which constitutes the moral agent's correct view of himself" and is the basis of most other virtues (Grenberg, 2005, p. 133). Wang et al. (2018) found that leader's growth mindset and relational identity are essential enablers of leader humility. Humility is a highly praised behavior, which can cause the recipient to produce a pleasant psychological response and bring a series of positive changes in mood, attitude and behavior (Zhong et al., 2019; Liu & Wang, 2020).

Current studies have confirmed the merits of leader humility at individual, team and organizational levels. First, at the individual level, humble leadership is conducive to improving employees' job satisfaction, reducing their turnover intention, increasing their work involvement, and enhancing their creativity (Liu & Wang, 2020; Owens et al., 2013; Zhong et al., 2019). Zhong et al. (2019) found that leader humility is positively related to employee well-being, and employee humility mediates the relationship between leader humility and employee well-being. Ete et al. (2020) found a nonlinear (inverted U-shape) indirect effect of leader honesty/humility on subordinate OCB through subordinate moral identity centrality. Second, at the team level, leaders' humility can improve the team's learning ability, cohesion and task allocation efficiency, thus promoting team development and overall team performance improvement (Owens et al., 2013; Owens & Hekman, 2016). When leaders behave modestly, followers are more likely to imitate their behavior, form a collective and humble team atmosphere, thus ultimately improving team performance (Owens & Hekman, 2016). Third, at the organizational level, humble leadership can improve firm performance (Ou et al., 2015). Ou et al. (2015) explained the relationship between CEO humility and firm performance, and found that CEO humility is positively related to top management team (TMT) integration, which positively improves firm performance via ambidextrous strategic orientation.

The leadership literature has provided growing evidence of the power of humble leadership in promoting employee creativity (e.g., Hu et al., 2018; Ye et al., 2020). Jeung and Yoon (2016) found that leader humility positively predicted followers' psychological empowerment, and followers' power distance orientation (PDO) positively moderated this relationship. Rego et al. (2020) found that leader humility strengthens team psychological safety, and the relationship is stronger (weaker) when within-team consistency of leader-expressed humility is high (low). Ye et al. (2020) found that leader humility exerts its impact on team humility, which in turn influences employee creative performance. The effect of team humility on employee creative performance was found to be strongest under high task dependence and high competitive climate. To sum up, humble behavior of leaders could convey signals of empowerment, organizational support and psychological security to their subordinates, encouraging them to share information and exchange resources, thus providing better service solutions and experience for customers (De Clercq & Belausteguigoitia, 2019; Yang et al., 2020). Therefore, hypothesis 1 was proposed.

Hypothesis 1: Leader humility positively affects subordinate service creativity.

Leader Humility, Social Learning Theory and Role Modeling

Role modeling is defined as "a cognitive construction based on the attributes of people in a social role a person perceives to be similar to him or herself in some way and hopes to achieve the similarity with those attributes through imitation" (Gibson, 2004 p.136). Bass and Avolio (1994) defined the role modeling as the degree to which leaders provides cases and examples to their followers. Koch and Binnewies (2015) described role models as those who can provide employees with examples strategies and behaviors to help them recover from work difficulties. Hence, workplace mentors (i.e., direct leaders) are the primary source of role models for employees (Brown & Treviño, 2014).

Previous documents on role modeling posited that leaders, especially immediate leaders, are the main source of role models for employees, whose behaviors directly affect subordinates' cognition, emotion and behavior. Typically, role models are individuals with power, competence, and higher status (Brown & Treviño, 2014; Wo et al., 2015). In organizations, leaders possess more power, stronger ability and higher status than their colleagues. As a result, employees more likely to regard leaders as attractive learning objects (Wo et al., 2015; Eby et al., 2015). Meanwhile, numerous studies have proved that the attitude and behavior of leaders have an important impact on their followers (Rich, 1997; Schaubroeck et al., 2016; Peng et al., 2020). For example, Peng et al. (2020) found that the humorous behaviors from leaders can create a harmonious, united and friendly atmosphere within the team, and imperceptibly influence subordinates to treat customers in a light-hearted and humorous way.

According to social learning theory, employees consciously or unconsciously observe, learn, and emulate the behavior patterns of their leaders in daily work and interpersonal communication, and exhibit similar behaviors to customers when interacting with customers (Bandura, 1991). As a learning model for employees, leaders' humble behaviors could be observed and imitated by employees, so that employees will behave more modest behaviors, which contributes to form a harmonious atmosphere within the team and facilitate information exchange among members (Owens & Hekman, 2016; Ye et al., 2020). First of all, a humble leader can face up to his own shortcomings and find the advantages of his/her subordinates. The more humble a team leader is, the more likely team members will be influenced by the leader to view themselves accurately, appreciate the strengths of colleagues, and recognize the efforts of colleagues (Morrison et al., 2011). An atmosphere of humility within the team encourages honest expression and feedback, mutual help, and accepting each other's ideas (Bharanitharan et al., 2019). Secondly, a humble leader is receptive to new ideas and knowledge (Owens et al., 2013). Under the influence of leaders, employees are willing to receive, understand and absorb the new ideas from team members, which is conducive to promoting the exchange of ideas among team members. Furthermore, humble leaders are good at accepting effective voices from employees, which is conducive to improving employees' perception of fairness (Owens & Hekman, 2012). When employees feel treated fairly by the leader, they will have a stronger sense of belonging and identity to the organization and show more extra-role behaviors (Carnevale et al., 2019; Jeung & Yoon, 2016), for example, actively share work experience with colleagues or cooperate to solve work problems. Accordingly, the following hypotheses were proposed:

Hypothesis 2: LH positively affects subordinates' perceived role modeling of leaders.

Hypothesis 3: Role modeling mediates the relationship between LH and subordinates' service creativity.

Leader Humility, Social Exchange Theory and LMX

According to the reciprocity of social exchange theory, when one party provides help and support to the other party in the process of social communication, the other party has the obligation and responsibility to reciprocate. The interests of both sides can also be satisfied through the process of resources exchanging (Blau, 1964). As a "lubricant" of organizational relationship, leader humility can effectively narrow the psychological distance between superiors and subordinates, and contribute to forming a harmonious communication atmosphere between superiors and subordinates (Mao et al., 2017; Cai et al., 2019). The expression of humility indicates that the sender is willing to treat the recipient in a more open, warm and tolerant manner. As such, leader's humility is seen as a signal of friendliness and kindness, which is conducive to maintaining a positive and strong working relationship with followers. Subordinates as recipients perceive the charm of leaders' humble behaviors and believe that the leader possesses strong personality attraction, so they tend to interpret this humility as a high-quality interpersonal relationship between themselves and the leader (Gkorezis et al., 2014). Furthermore, humble leaders attach importance to employees' autonomy needs and encourage employees to give full play to their strengths at work (Owens & Hekman, 2012). In this process, leaders are more likely to be accepted by subordinates and form an excellent LMX relationship. As such, this paper theorized that the use of humility by leaders to their subordinates will trigger a higher LMX (Peters et al., 2011; Qin et al., 2020), and the hypothesis 4 was proposed.

Hypothesis 4: LH is positively associated with subordinates' perception of LMX.

Through the influence of leader humility on LMX, this research theorizes that leader humility can enhance the service creativity of subordinates via LMX. Service creativity is defined as a process in which service personnel generate novel and useful ideas to solve customer's problem. The improved employee creativity will also have a positive impact on employee service performance and customer satisfaction (Dong et al., 2015; Sok et al., 2018). Existing research suggests that friendly and humble leadership can induce and enhance the creativity of subordinates (Liu & Wang, 2020), and LMX is one of the most critical and relevant factors to promote the creativity of subordinates (Tierney et al., 1999). For instance, Han and Bai (2020) found that leader dialectical thinking play significant roles in facilitating employee creativity, and LMX also influences followers' creativity. In a high-quality LMX relationship, leaders can not only provide necessary support and organizational resources for employees to enhance their creativity, but also motivate subordinates to voice at work (Graen & Uhl-bien, 1995; Bharanitharan et al., 2019). Notably, creativity often comes from the collision of constructive thinking, and the leader's humility can ease the vicious conflicts and contradictions to enhance the trust among the members. On this basis, employees dare to actively communicate with leaders and strive to realize their own ideas without too much consideration of the risk of failure. Existing studies suggest that humility from supervisors implies relational openness and inclusiveness, which is linked to a higher level of LMX that drives performance and creativity (e.g., Tierney et al., 1999; Wang et al., 2019; Qin et al., 2020). Accordingly, this study put forward hypothesis 5.

Hypothesis 5: LMX mediates the relationship between LH and subordinates' service creativity.

Moderating Role of Team Relationship Conflict

Team conflict, which is inevitable for any team, refers to a process of disagreement and infighting between team members due to real or perceived personal incompatibility (De Dreu & Weingart, 2003), including team task conflict and team relationship conflict (Jehn, 1995). Scholars generally define relationship conflict as a kind of interpersonal conflict, which involves a series of negative emotions caused by interpersonal incompatibility among team members, such as tension, anger, and hostility (Jehn, 1995). Relationship conflict may have a negative impact on the cooperation and communication within the team and ultimately interfere with work outcomes, such as increasing counter-productive behavior and uncivilized behavior (Enns & Rotundo, 2012; Lappalainen, 2019). Zhou et al. (2014) found that team conflict would inhibit team creativity via team potency, and task conflict positively affects team creativity, thus weakening team creativity. However, Mao et al. (2017) found that relationship conflict can strengthen the indirect effect of leader humor on team performance through subordinates' transformational leadership perceptions. As such, this paper wondered whether TRC facilitates or inhibits the effectiveness of positive leadership?

Team relationship conflict would affect subordinates' perception of leadership capability and authority. TRC is usually accompanied by negative emotional expressions among members, such as resistance to cooperation, distrust, fear, and frustration (Tekleab & Quigley, 2014). Long-term negative emotions will seriously limit the cognitive ability and information processing ability of team members, thus weakening the selfefficacy of team members (Zhou et al., 2014). When the team relationship conflict is high, subordinates may accuse the team leader of not adequately performing their responsibilities, questioning the leader's ability to ease interpersonal tension and whether the leader fits their ideal leader prototype (Mao et al., 2017). Hence, supervisors' authority and image will be compromised, leading to the decline of subordinates' evaluation of the leader, while role modeling is essentially the reflection of subordinates' cognition and evaluation of leaders. As a consequence, in the context of high TRC, the leader's influence on subordinates will be reduced, and his/her humble behavior will be regarded as a sign of weakness and compromise, which will weaken the perception of the leader's leadership and charismatic personality. To sum up, team relationship conflict can weaken the relationship between leader humor and role modeling. Accordingly, the following hypothesis was proposed:

Hypothesis 6a: TRC negatively moderates the relationship among LH and role modeling.

Previous studies have shown that compared with those with low humility, individuals with high humility are more helpful (Labouff et al., 2012), express more gratitude (Rowatt et al., 2006), accept those who disagree with them (Wright et al., 2017), and are more likely to improve the quality of social relationships (Peters et al., 2011). Leader-member exchange (LMX) refers to a two-way social exchange between leaders and subordinates (Blau, 1964; Qin et al., 2020), which involves subordinates' evaluation of the quality of their work or personal relationship with the direct leader. On the one hand, when the team is in high relationship conflict, members may perceive insecurity and loneliness. Meanwhile, the leader is still willing to express friendly behaviors (e.g., humility) to the subordinates, which makes them feel supported and cared by the leader, enhancing their psychological safety (Rego et al., 2020). Leaders, on the other hand, are willing to appreciate and listen to followers' voices, which will enhance their perceived team status. Then, they will also make some positive behaviors to reward the leader, thus strengthening the relationship between superiors and subordinates (i.e., LMX). Therefore, this research theorized that team relationship conflict can positively moderate the relationship between LH and LMX, and H6b was proposed:

Hypothesis 6b: TRC positively moderates the relationship among LH and LMX.

Moderated Dual Mediation Model

To integrate the above relationships, this paper proposed a moderated dual path model in which team relationship conflict moderates the indirect relationship between leader humility and subordinate service creativity, according to the previous text. As LMX and role modeling decline, employees will also actively or inadvertently reduce the output of positive behavior. Hence, the following hypotheses were proposed, and the conceptual model was shown in Fig. 1.

H7a: The indirect relationship between LH and subordinate service creativity, via role modeling, is moderated by TRC such that the indirect effect is stronger when TRC is low, but weaker when TRC is high.

H7b: The indirect relationship between LH and subordinate service creativity, via LMX, is moderated by TRC such that the indirect effect is stronger when TRC is high, but weaker when TRC is low.

Methodology

Sample and Design

In order to test these proposed hypotheses, this study collected a sample of 39 questions which included leader humility (LH), role modeling, LMX, TRC, service creativity, and demographic characteristics. Data were collected from service team members (such as sales staff and service staff) from ten enterprises in mainland China, who are in direct contact with customers in their daily work. In this study, 400 questionnaires were distributed and 348 valid samples were collected, with a recovery rate of 87% (males = 53.2%). See Table 1 for details.

Table 1Sample demographic

Characteristic	Classification	Respondents	
		N	%
Gender	Male	185	53.2%
	Female	163	46.8%
Age	18 years old or below	2	0.6%
	19-25 years old	25	7.2%
	26-30 years old	92	26.4%
	31-40 years old	171	49.1%
	41-50 years old	52	14.9%
	51-60 years old	6	1.7%
Education	high school or below	13	3.7%
	associate degree	72	20.7%
	bachelor degree	243	69.8%
	master degree or above	20	5.7%
Tenure in current company	< 1 year	24	6.9%
	1-2 years	50	14.4%
	3-5 years	125	35.9%
	6-10 years	106	30.5%
	> 10 years	43	12.4%
Team size	< 3	4	1.1%
	3–5	40	11.5%
	6–10	94	27%
	11–15	81	23.3%
	16–20	54	15.5%
	> 20	75	21.6%

Measures

Leader Humility Leader humility was assessed by subordinates using a nine-item scale from Owens et al. (2013) on a 7-point scale from 1 (not at all) to 7 (very much), a sample item is: "My immediate superior actively seeks feedback, even if it is critical" ($\alpha = 0.936$).

Role Modeling A five-item scale from Rich (1997) was adopted to measure role modeling with a 7-point scale from 1 (strongly disagree) to 7 (strongly agree), a sample item is: "My immediate superior sets a positive example for others to follow" ($\alpha = 0.937$).

Leader-Member Exchange (LMX) An eight-item scale developed by Bauer and Green (1996), was employed to measure subordinate perception of LMX with immediate superior. A sample item is: "My immediate supervisor understands my problems and needs" ($\alpha = 0.892$), from 1 (strongly disagree) to 7 (strongly agree).

Team Relationship Conflict This study used the Chinese version of team relationship conflict adapted by Zhou et al. (2014), which originally developed by Pelled et al. (1999). This scale includes four items and was reported by team members. Sample items include "In my team, there was tension among the members" and "In my team, there are emotional conflicts among the members" (1-not at all, 7-very serious; $\alpha = 0.869$).

Service Creativity Service creativity was rated by subordinates using an eight-item scale from Dong et al. (2015) on a 7-point scale from 1 (not at all) to 7 (very much), A sample item is: "I would suggest new ways to achieve service objectives" ($\alpha = 0.905$).

The employed scales were translated and re-translated by English-Chinese translators and professors from the School of Management to ensure that the subjects could correctly understand the true meaning of the scale (Hambleton, 1996).

Control Variables In addition to employees' gender, age and education level, their tenure and team size were also collected.

Data Analysis and Results

Confirmation Factor Analysis

In order to verify the fitness of the model, a series of confirmation factor analysis (CFA) was performed on the measurement model using Mplus8.3. As shown in Table 2, the hypothesized five-factor model demonstrated superior fit to this model than other alternative nested models ($\chi^2 = 1665.56$,

Table 2 Results of the confirmatory factor analysis

Model	χ ²	df	CFI	TLI	SRMR	RMSEA
Five-factor model	1665.56	517	0.874	0.863	0.053	0.08
Four-factor model	2465.05	521	0.786	0.770	0.089	0.104
Three-factor model	3062.26	524	0.721	0.701	0.097	0.118
Two-factor model	3672.48	526	0.654	0.631	0.103	0.131
One-factor model	3934.46	527	0.625	0.601	0.109	0.136

N= 348. "Four-factor model": Team relationship conflict and service creativity were combined into one factor, "Three-factor model": LMX, Team relationship conflict and service creativity were combined into one factor, "Two-factor model": Team relationship conflict, role modeling, LMX, and service creativity were combined into one factor

df = 517, CFI = 0.874, TLI = 0.863, RMSEA = 0.08, SRMR = 0.053). As a result, there exists a high degree of discrimination among all variables in this study.

Common Method Bias Test

As the data in this study are all from self-report, there may be a common method variance in the measurement. The measured latent marker variable approach was employed to test the common method bias. Firstly, a confirmatory factor analysis model was constructed, whose main fitting index is: $\chi^2/df = 3.26$, CFI = 0.870, TLI = 0.860, RMSEA = 0.081, SRMR = 0.062. Secondly, on the basis of the original confirmatory factor analysis model, a new method latent factor is added, so that all the measurement items are loaded on both the construction factor and the method latent factor. Compared with the original model, the change of main fitting index is that $\Delta \chi^2/df = .04$, $\Delta CFI = .004$, $\Delta TLI = .003$, $\triangle RMSEA = .009$, $\triangle SRMR = .001$. The variation of each fitting index was all less than 0.02. Consequently, the data results could be interpreted as that the model was not significantly improved after adding the common method factor, and there was no obvious common method bias in the measuring process (Podsakoff et al., 2003; Liu et al., 2015).

Descriptive Statistics

The descriptive statistics and inter-correlations of all variables are shown in Table 3. Service creativity is positively correlated with LH, role modeling, LMX and TRC (r = 0.501, 0.557, 0.547, -0.201, p < 0.01). In addition, role modeling is significantly correlated with LH and LMX (r = 0.842, 0.625, p < 0.01), LMX is significantly correlated with LH (r = 0.594, p < 0.01).

Test of Hypotheses

Mplus8.3 was employed to test all the proposed hypotheses. First, the main effects of LH on service creativity, role modeling and LMX were examined. As shown in Table 4, LH has a significant positive influence on role modeling (b = 0.858, p < 0.001, M1), LMX (b = 0.564, p < 0.001, M2) and service creativity(b = 0.553, p < 0.001, M3). Therefore, the results provided empirical support for H1, H2 and H4.

Next, to examine the simple mediation effect (H3&H5), this study constructed a hypothetical model with leader humility as the independent variable, service creativity as the dependent variable, role modeling and LMX as the mediating variables. The main effect of LH on role modeling (b = 0.966, p < 0.001) and the main effect of role modeling on service creativity (b = 0.316, p < 0.001, M4) were both significant. The indirect effect of role modeling was also significant (b = 0.305, S.E. = 0.065, 95%CI = [0.181, 0.435]). On the other hand, the main effects of LH on LMX (b = 0.798, p < 0.001) and LMX on service creativity (b = 0.503, p < 0.001, M5) were both significant. The indirect effect of LMX was also significant (b = 0.401, S.E. = 0.053, 95%CI = [0.30, 0.51]). Furthermore, results showed that there is no significant difference between the mediating role of LMX and that of role modeling (b = -0.13, S.E. = 0.072, 95% CI = [-0.266, 95%]0.012]).

Moderation Analysis H6a predicts that TRC negatively moderates the relationship between LH and role modeling, which was supported (b = -0.049, t = -2.165, p < 0.05). To demonstrate the moderating role of TRC on the relationship between LH and role modeling, a simple slope analysis (Fig. 2) was

Table 3	Means, standard
deviation	ns, and correlations of all
variable	s in this study

Variables	Mean	SD	1	2	3	4
1.LH	5.40	1.069				
2.Role Modeling	5.49	1.228	.842**			
3.LMX	4.85	1.075	.594**	.625**		
4.TRC	3.96	1.377	356**	354**	153**	
5.Service creativity	5.57	0.850	.501**	.557**	.547**	201**

Note. N = 348. * *p* < 0.05, ** *p* < 0.01

Table 4Results of main effectand mediating effect

	Role modeling	LMX	Service creativity			
	M1	M2	M3	M4	M5	
Intercepts	0.123	0.350	0.367	0.272	1.007	
Gender	-0.072	0.212***	0.162***	-0.023	0.287***	
Age	0.038	0.110*	0.074*	-0.057	0.042	
Tenure	0.116**	-0.060	-0.038	0.102	-0.051	
Education	0.043	0.107*	0.082*	0.038	0.054	
Team size	0.028	0.147**	0.111**	0.197***	0.049	
LH	0.858***	0.564***	0.553***	0.268***	-0.035	
Role modeling				0.316***		
LMX					0.503***	
R ²	0.736	0.790	0.790	0.709	0.662	
T value	23.621***	25.504***	26.020***	19.130***	15.169***	

Note. N = 348, **p* < .05, ***p* < .01, ****p* < .001

performed as suggested by Aiken and West (1991). When TRC is high, the relationship among LH and role modeling is significantly weaker (b = 0.917, t = 11.685, p < 0.01), and which stronger when TRC is low (b = 1.051, t = 8.008, p < 0.01).

Likewise, the interaction of leader humility and TRC is positively and significantly related to LMX (b = 0.03, t = 5.107, p < 0.001). A simple slope analysis (Fig. 3) was performed to demonstrate the moderating role of TRC on the relationship between LH and LMX. When TRC is high, the relationship among LH and LMX will be significantly stronger (b = 0.478, t = 9.159, p < 0.01), which will be significantly weaker when TRC is low (b = 0.396, t = 6.335, p < 0.01). Consequently, H6a-b are supported.

Moderated Mediation Effect Analysis In order to investigate the moderated mediation effect (H7a & H7b), this study constructed the whole model with leader humility as IV, service creativity as DV, role modeling and LMX as the mediators,

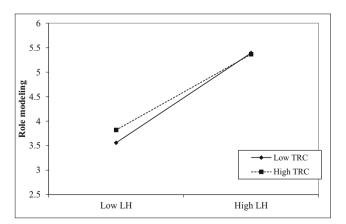


Fig. 2 The interactive effect of leader humility and team relationship conflict on role modeling

and team relationship conflict as moderator. Table 5 revealed that when mediator is role modeling, the index of moderated mediation is 0.002, *S.E.* = 0.009, 95%CI: [-0.013, 0.024], including 0. Specifically, when TRC is high (estimate = -0.019, *S.E.* = 0.066, 95%CI = [-0.148, 0.108]) or low (estimate = -0.021, *S.E.* = 0.074, 95%CI = [-0.167, 0.124], the mediating effect is not significant. Therefore, results indicate that H7a is not supported.

Conversely, when mediator is leader-member exchange, the index of moderated mediation is 0.024, *S.E.* = 0.024, 95%CI: [-0.023, 0.073], including 0. Specifically, when TRC is high, the indirect effect coefficient is 0.127, *S.E.* = 0.039, 95%CI: [0.063, 0.217], not including 0. Similarly, when TRC is low, the indirect effect coefficient is 0.102, *S.E.* = 0.057, 95%CI: [0.009, 0.231], excluding 0. Results indicate that in the path of "LH \rightarrow LMX \rightarrow service creativity", LMX partly mediates the relationship among LH and subordinate service creativity no matter whether TRC is high or low, which provides partly empirical support for H7b.

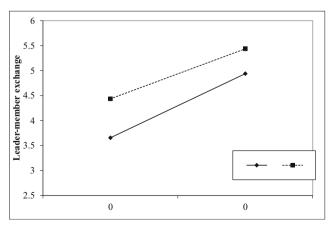


Fig. 3 The interactive effect of leader humility and team relationship conflict on LMX

Table 5Results for conditionalindirect effect of LH onsubordinate service creativity atdifferent levels of TRC

Paths & effects	Estimate	S.E.	95% CI
$LH \rightarrow Role modeling \rightarrow Service creativity$			
High team relationship conflict (+1 SD)	-0.019	0.066	-0.148, 0.108
Low team relationship conflict (-1 SD)	-0.021	0.074	-0.167, 0.124
Indirect difference	0.002	0.009	-0.013, 0.024
LH→ LMX→ Service creativity			
High team relationship conflict (+1 SD)	0.127	0.039	0.063, 0.217
Low team relationship conflict (-1 SD)	0.102	0.057	0.009, 0.231
Indirect difference	0.024	0.024	-0.023, 0.073

The confidence interval (95%CI) contains 0, indicating that the mediating effect is not significant

Conclusions and Discussions

Built on social exchange theory and social learning theory, the current study investigated the relationship between leader humility and subordinate service creativity from an integrated perspective. On the one hand, leaders' humility contributes to set an example for the subordinates, which is positively related to the service creativity of subordinates. On the other hand, leader humility increases followers' perception of LMX, which in turn induces and motivates their service creativity. Moreover, this research further revealed that team relationship conflict moderates these mediating effects. Specifically, TRC promotes the effect of LH on LMX, but inhibits the effect of LH on role modeling. Below, this paper further discusses the theoretical contributions, practical implications of this study and the future research direction.

Theoretical Contributions

This paper offers some theoretical contributions for literature on leader humility, role modeling, LMX, team relationship conflict, and service creativity. First and foremost, this paper contributes to the humility literature by attempting to integrate and reconcile these different humility theory. Specifically, this study found that there are two different paths (i.e., role modeling and LMX) in the influence of leader humility on subordinates' service creativity. In addition, existing studies on leader humility mainly focus on in-role behavior (i.e., performance), neglecting extra-role behavior (e.g., Owens et al., 2013; Owens & Hekman, 2016; Rego et al., 2019). Recently, scholars (e.g., Hu et al., 2018; Owens et al., 2019) have begun to explore the influence of leader humility on extra-role behavior from different perspectives, such as team creativity and prosocial behavior. This study tested the positive effect of leader humility on service creativity via integrating different theories of humility, which is a positive response to the work of these scholars.

Secondly, the present research contributes to the role model literature by extending the discussion on the causes of role modeling. Based on the perspective of team learning, this study found that the humble behavior of leaders would establish and strengthen the subordinates' perception of role modeling of leaders, thus generating a positive association with the innovative behavior of subordinates. Moreover, this study also validated the critical role that leaders play in promoting organizational learning and team learning (Barbour, 1998; Robert & Wilbanks, 2012), which is consistent with the research by Owens and Hekman (2016). The influence of team leaders' behavior on subordinates will be expanded due to their power to directly determine the vital interests of employees (Barczak & Wilemon, 1989; Beatty & Lee, 1992).

Thirdly, the present research enriches the LMX literature in leader humility by investigating the relationship between LH and LMX. As mentioned earlier, LMX has been proven to be one of the most critical underlying mechanisms for explaining the relationship between leaders' behaviors and employees' work outcomes (e.g., Yam et al., 2018; Bowler et al., 2019; Qin et al., 2020). This study revealed that leader humility is positively associated with LMX, especially when team relationship conflict is high. Our findings also echo previous studies on the relationship between leader humility and LMX, such as Qin et al. (2020).

Last but not least, this research enriches the boundary condition of the effectiveness of leader humility on service creativity. As an important boundary factor of group-level characteristic, TRC was introduced into the relationship between leader humility and subordinate's service creativity. Specifically, TRC strengthens the effect of LH on LMX, but weakens the effect of LH on role modeling. This finding reveals the double-edged sword role of TRC in the process of leader humility enhancing subordinates' creativity, which enriches the TRC literature. Moreover, this paper echoes and supplements the extremely positive or negative views of some scholars on TRC (e.g., Zhou et al., 2014; Mao et al., 2017; Thiel et al., 2019). For instance, Chen et al. (2011) and Zhou et al. (2014) hold that TRC would inhibit employees' creativity, while Mao et al. (2017) and Thiel et al. (2019) believed that TRC would strengthen the influence of positive

leadership on subordinates. Therefore, under different paths, the role of TRC will change dramatically.

Practice Implications

According to the research conclusion, there are three implications worth noting. First of all, this paper emphasizes that organizations should attach importance to the pivotal role of humility. As a remarkable and excellent quality, leaders' humility sets an example for their subordinates to follow and enhance the relationship between superiors and subordinates, which is conducive to facilitating employee performance, prosocial behavior and creativity (Owens & Hekman, 2016; Hu et al., 2018; Owens et al., 2019). Moreover, leaders should employ a variety of management styles to motivate the increase of creativity of their subordinates, such as humility and humor (e.g., Hu et al., 2018; Peng et al., 2020).

Secondly, our results indicate that leader humility is positively related to role modeling. As a result, leaders should increase modest behaviors in front of subordinates and set examples for subordinates, thus creating a humble and inclusive team atmosphere (Owens & Hekman, 2016). In an inclusive rather than conflicting atmosphere, members are more willing to share information, exchange resources, and solve difficult problems together, thus improving team overall performance (Hu et al., 2018).

Finally, these findings show that leader humility can enhance subordinates' perception of LMX. The increased humility of a leader can make followers perceive more kindness and fairness, and subordinates will be more cooperative with the tasks assigned by the leader. While excessive humility may lead to followers' deviant behavior (Qin et al., 2020), proper humility is more helpful than harmful to a team's work. As such, how to control the degree of humility is a difficult question for all leaders to ponder carefully. Meanwhile, most of the literature indicates that relationship conflict can inhibit the positive relationship between leadership and subordinates' positive behavior (Jehn, 1995; Tekleab & Quigley, 2014). Although this study reveals that relationship conflict strengthens the relationship between LH and LMX, it does weaken the effect of LH on role modeling. Consequently, team leaders should fairly handle the relationship conflicts within the team, so as to provide guarantee for the generation and application of creativity of subordinates.

Limitations and Future Research

These contributions should be qualified in light of several limitations. Firstly, through integrating social learning theory and social exchange theory, this paper investigated two mechanisms of LH on service creativity. This research method is closely related to Yam et al. (2018) and Qin et al. (2020), which helps to comprehensively explored the

influence of leaders' humility from multiple perspectives. Future research, therefore, could consider exploring and integrating the mechanisms of humility from various theoretical perspectives, such as social identity theory, benign violation theory, and affective events theory.

Secondly, although this study examined the moderating role of team relationship conflict, existing studies suggested that in addition to work team characteristics, the characteristics of the producer and receiver of the humble behavior, leader-member relationship, and the environment also affect the effectiveness of leadership (e.g., Owens et al., 2015; Carnevale et al., 2019; Peng et al., 2020). Future research could explore other potential moderators, such as the characteristics of leaders (e.g., emotional intelligence), the characteristics of employee (e.g., interpersonal sensitivity), or other team-level variables (e.g., team diversity).

Lastly, the measurement of LMX and service creativity is self-reported by employees, which may be overestimated or underestimated. In the future, it can be considered that the staff, the supervisor or the customer jointly evaluate these variables to obtain more objective data. Moreover, some scholars (e.g., Owens et al., 2019; Qin et al., 2020) recommend employing longitudinal studies to better capture the changes of the impact of leader humility on subordinates' behaviors, which we also strongly agree with. Further explorations should be considered into these interesting issues.

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Data Availability The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethical Approval This article contains a study with human participants. All of the procedures involving human participants were in accordance with the APA ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

Conflict of Interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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