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Employee incremental and radical creativity

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CHAPTER 3

EMPOWERING LEADERSHIP AND FOLLOWER INCREMENTAL AND RADICAL CREATIVITY: AN EXPERTISE POWER-SELF-EFFICACY PERSPECTIVE

Abstract

In the relationship between empowering leadership and follower incremental and radical creativity, we theorized and examined follower expertise power and creative self-efficacy as mediators and follower power distance orientation as a moderator. Using data collected from 325 supervisor-employee dyads in an academic institution in China, we found follower expertise power to mediate the relationship between empowering leadership and follower incremental creativity, whereas follower expertise power and creative self-efficacy sequentially mediated the relationship between empowering leadership and follower radical creativity. Furthermore, both mediating relationships were conditional on power distance orientation for the path from empowering leadership to employee expertise power. Theoretical and practical implications are discussed.

INTRODUCTION

Empirical evidence increasingly supports that empowering leadership constitutes an essential contextual factor in activating follower creativity (Chen et al., 2011; Harris et al., 2014; Zhang & Bartol, 2010; Zhang & Zhou, 2014). Empowering leadership involves “sharing power with a view toward enhancing employees’ motivation and investment in their work” (Zhang & Bartol, 2010: 107; see also: Conger & Kanungo, 1988; Thomas & Velthouse, 1990). Creativity, in general, refers to the generation of novel and potentially useful ideas for products, services, processes, or procedures (e.g., Amabile, 1996; Shalley et al., 2004). Taking an intrinsic motivational perspective, scholars have identified psychological empowerment, intrinsic motivation, creative self-efficacy, and creative process engagement as individual-level mediators linking empowering leadership with follower creativity (Harris et al., 2014; Zhang & Bartol, 2010; Zhang & Zhou, 2014). At the team level, team members’ motivational states of psychological empowerment and affective commitment were found to mediate the relationship between empowering leadership and team members’ innovative behaviors (Chen et al., 2011). Hence, we know a great deal about how empowering leadership, through the activation of various intrinsic motivational processes, motivates employees to engage in creative actions.

Although these studies have significantly expanded our understanding of the role of empowering leadership in employee creativity, we argue that they have overlooked two important aspects. First, research on creativity has largely neglected to examine the relational power dynamic integral to empowering leadership – that is the “redesign of leader-subordinate power relations” (Vecchio, Justin, & Pearce, 2010: 530). This transformation of the leader-subordinate power relation is crucial in enhancing subordinates’ capacities to exercise actual influence in relation to their leaders (Emerson, 1962; Forrester, 2000). Given the importance of

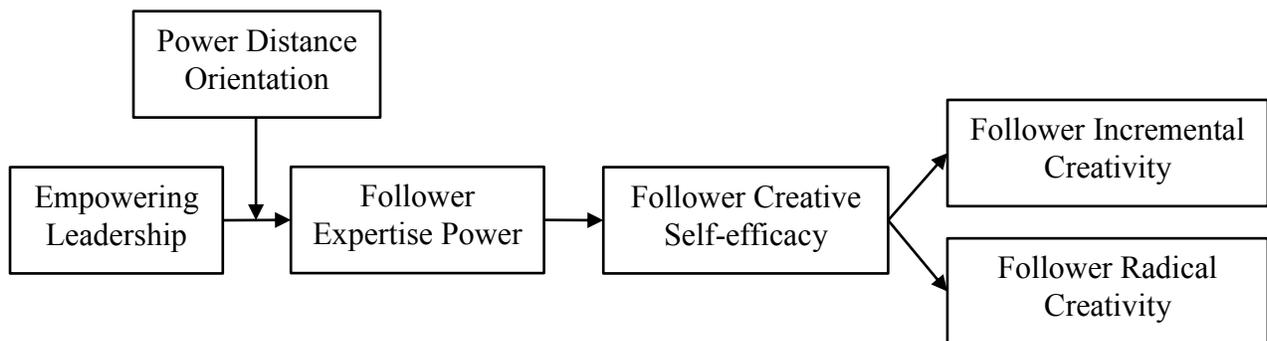
perceived power and influence in promoting creative behavior (Janssen, 2005), it is important to examine the explanatory role of follower perception of power in the relationship between empowering leadership and follower creativity.

Second, previous studies linking empowering leadership and follower creativity have predominantly taken a general account of creativity and have therefore neglected that there are qualitatively different types of creative ideas (e.g., Chen et al., 2011; Zhang & Bartol, 2010). Incremental creativity refers to the generation of ideas that imply small changes in frameworks and minor modifications to existing products, services, and processes, whereas radical creativity entails ideas that differ substantially from accepted modes of thought or current ways of doing things in organizations (Madjar et al., 2011). An emerging body of work has theoretically and empirically distinguished incremental creativity from radical creativity and has shown that these two distinct forms of creativity are evoked by different antecedents (Gilson et al., 2012; Gilson & Madjar, 2011; Jaussi & Randel, 2014; Madjar et al., 2011). Given the value of both incremental and radical creativity (cf. Jansen, Van Den Bosch, & Volberda, 2006), it is important to explore if and how empowering leadership may influence either or both forms of creativity.

Combining the literature on empowering leadership (Ahearne et al., 2005; Conger and Kanungo, 1988) with core features from the approach/inhibition theory of power (Keltner et al., 2003) and the componential theory of creativity (Amabile, 1983), we propose that empowering leadership leads to both incremental and radical creativity sequentially through follower expertise power and creative self-efficacy. More specifically, we first propose that empowering leadership results in elevated follower expertise power, which is an important source of personal power in the work domain (Yukl & Falbe, 1991) that reflects the perceptions of capacity to provide work-related knowledge, skills, and abilities valued by the leader (French and Raven,

1959). Second, because perceived expertise power is essential for employees to perform creatively (Amabile, 1983; Keltner et al., 2003), we expect that follower sense of expertise power leads to greater self-efficacy assessment in creativity. Third, because such creativity-specific efficacy represents a more proximal motivation necessary for followers to engage in and persist through the creative process, we propose that creative self-efficacy is likely to yield both incremental and radical forms of creativity. Finally, because power distance orientation influences how subordinates frame and judge the power delegated by their supervisor (Chen & Aryee, 2007; Kirkman, Chen, Farh, Chen, & Lowe, 2009), the effect of empowering leadership on expertise power may be conditional upon the power distance orientation of subordinates. Hence, we propose that the indirect relationships between empowering leadership and incremental and radical creativity are conditional upon subordinates' power distance orientation. Our conceptual model is shown in Figure 3.1.

Figure 3.1 Overview of the hypothesized model



Through our study, we aim to contribute to the literature in various ways. First, we integrate insights from theories of empowering leadership, social power, and creativity to identify expertise power as the type of social power that can be acquired by followers when their leaders exhibit empowering leadership behavior. Second, by combining core features from the componential model of individual creativity and the approach/inhibition theory of power, we

examined creative self-efficacy as a sequential mediating mechanism through which follower expertise power manifests itself in the forms of incremental and radical creativity. Third, we identify follower power distance orientation as a boundary condition that moderates the indirect relationships between empowering leadership and follower incremental and radical creativity. Fourth, by differentiating between incremental and radical creativity, we explored whether the process mechanisms of expertise power and creative self-efficacy through which, and the boundary condition of power distance orientation under which, empowering leadership induces follower creativity would hold for incremental and/or radical levels of creativity.

THEORY AND HYPOTHESES DEVELOPMENT

Empowering leadership and follower perceptions of expertise power

Due to their legitimate position of authority, leaders have control over a broad range of resources that are highly important for employees. As such, leaders have power over the role relationships with their followers, resulting in an imbalanced power-dependence structure. Through empowering leadership, leaders intentionally transfer and delegate power to their subordinates by providing them with autonomy and participation in decision making, by articulating the meaningfulness of their work, and by conveying confidence in their abilities to achieve high work performance (Ahearne et al., 2005; Chen et al., 2011; Zhang & Bartol, 2010). As empowerment is ‘a matter of degree rather than an absolute’ (Ford & Fottler, 1995: 22), leaders tend to individualize their empowering leadership behavior towards individual followers. That is, based on their judgments regarding followers’ competence, and the goal congruence and quality of relationship they have with each of their followers (Yukl & Fu, 1999), leaders differentiate the degree of power they delegate to them (Zhang & Bartol, 2010). Hence, we

consider empowering leadership to be a dyadic phenomenon between the leader and each individual follower.

Given that there are various different types of power (French & Raven, 1959), however, the question is what type of power leaders empower their followers with. Formal position power is inherently asymmetrical in the leader-follower relationship – that is, one of the two parties (i.e., the leader) has natural control over the other party (i.e., the follower) – meaning that leaders are unable to devolve these power bases without deteriorating their leader positions. Hence, it seems unlikely that empowering leadership results in the acquisition of such positional power bases on the part of followers. However, informal personal power is void of socio-structural positions (Anderson, John, & Keltner, 2012), meaning that leaders may be able to empower their subordinates with such personal power bases. According to French and Raven's (1959) taxonomy, the power bases that an employee can substantially obtain from empowering leadership and use in exchanges with the leader are expertise power and referent power.

Expertise power in the relationship with the leader refers to the follower's sense of capacity to use his/her knowledge, skills, and abilities to influence the leader, whereas referent power reflects a sense of ability to influence the leader because the leader respects and identifies with the follower (French & Raven, 1959; Hinkin & Schriesheim, 1989). In the creativity literature (Amabile, 1983), domain expertise represents the ideational sample that feeds creative idea generation. We propose that follower expertise power could explain the relationship between empowering leadership and follower creativity. It is also possible that employees might gain referent power in relation to empowering leaders when the leaders respect and closely associate with employees. However, it is difficult to see how this can drive a follower's engagement in creativity. We therefore leave this power source out of further consideration.

We have two lines of argumentation to posit that empowering leadership is likely to raise follower expertise power. First, we argue that empowering leadership is likely to directly enhance follower expertise power by making salient that leaders highly value follower expertise as a resource. Empowering leaders encourage employees to become involved in decision-making and explicitly solicit their input on a variety of issues, which conveys that leaders need to rely on employees' knowledge, opinions, and suggestions. Moreover, by expressing their confidence in followers' competence, empowering leaders evoke a psychological state of experienced expertise power in employees. Those leader-driven initiatives clearly indicate that employees possess unique knowledge and expertise that their leader needs, meaning that followers can have expertise power over their leaders.

Second, we argue that empowering leadership is likely to indirectly build follower expertise power through facilitating further development of such expertise power. By providing followers with autonomy and freeing them from bureaucratic constraints, empowering leaders effectively transfer ownership of work activities to followers, and thus provide them more opportunities to develop their expertise. Having the discretion to initiate, regulate, and control the execution of tasks, employees are inspired to acquire knowledge and skills via active learning (e.g., Leach, Wall, & Jackson, 2003; Wall, Jackson, & Davids, 1992). Additionally, by delineating the significance of work, empowering leadership can help employees to have a good understanding of what their work roles and responsibilities are and how they can impact the goals of their work unit. Through the cultivation of perceptions of task significance, followers are more likely to realize the need to accumulate their expertise for successful task completion, which fuels perceptions of expertise power. Based on these theoretical arguments, we formulate the following hypothesis:

Hypothesis 1: Empowering leadership is positively related to follower perceptions of expertise power.

Follower expertise power, creative self-efficacy, and incremental and radical creativity

To further clarify how follower perceptions of expertise power elicit incremental and radical creativity, we posit creative self-efficacy as a proximal mechanism through which employees channel and enact their expertise power into these two distinct forms of creativity. Creative self-efficacy denotes the belief that one has the ability to produce creative outcomes (Tierney & Farmer, 2002, 2011), and is determined, in part, by an individual's subjective assessment of whether his/her personal resources are inferior, adequate, or superior for creativity. Because the experience of elevated expertise power facilitates optimistic self-efficacy assessment and the achievement of creative performance for cognitive and social reasons, we expect follower expertise power to be a source of creative self-efficacy.

Creativity is not a purely internal process, but is constructed through the interpersonal interaction between the creator and the gatekeeper of a social field (Csikszentmihalyi, 1999). In work contexts, introducing new and better ways of doing things usually implies that employees step into the realm of the leader's power. Powerless employees in such settings might deliberate more on the possibility that their ideas may not be recognized as creative and useful by their leaders (Mueller, Melwani, Loewenstein, & Deal, 2018), which inhibits them from developing and presenting their ideas to their leader. However, power activates the behavioral approach system, and approach-related tendencies lead to a greater attention to positive and action-facilitating information and a decreased sensitivity to threats (Keltner et al., 2003; Anderson & Galinsky, 2006). Followers with elevated sense of expertise power tend to focus on and act upon the possessed expertise which constitutes the network of cognitive wanderings for idea

generation, rather than to deliberate on failures and image risks associated with creativity. As such, the experience of expertise power may lead employees to feel confident in cognitively generating novel and potentially useful ideas within their mind as well as capable of socially convincing their leaders about the ideas they have produced. Based on these theoretical arguments, we formulate the following hypothesis:

Hypothesis 2: Follower perceptions of expertise power are positively related to follower creative self-efficacy.

For the second path of the mediation chain, we propose that creative self-efficacy represents a proximal creativity-specific motivational impetus to elicit creative endeavors and hence has predictive effects on both incremental and radical forms of creativity (Tierney & Farmer, 2002, 2011). Self-efficacy feelings for creativity imply that creativity is an area in which one has a positive balance between the challenges of creative actions and the possession of corresponding capacities and skills to effectively deal with those challenges (Jaussi & Randel, 2014). Employees who firmly believe that they have the capacity to be creative tend to intentionally engage in the creative process. Due to the trial-and-error nature of the creative process, however, people may quit too early and leave more novel ideas undiscovered (Lucas and Nordgren, 2015). Hence, individuals could not sustain their creative endeavors unless they believe in themselves and had confidence in their creative abilities, which highlights the necessity of creative self-efficacy for fueling the creative process.

Furthermore, creative self-efficacy is critical for cognitive expansion that underlies creative idea generation. In order to come up with novel and potentially useful ideas, employees need to mobilize creativity-relevant skills to deeply and broadly process domain knowledge and experience (Amabile, 1983). Because creativity is an area where they are confident to excel,

individuals with a high level of creative self-efficacy are more likely to aim at achieving radical breakthroughs and far-reaching creative ideas by thinking beyond the initial ideas and expanding cognitive pathways. As a result, they are more likely to shift the framing of problems to be solved, consider a variety of possibilities and envision novel combinations among seemingly unrelated elements. That is, employees with high confidence and expectations in creative capabilities are likely to take advantage of their expertise and cognitive capacities to think creatively and achieve incremental and radical creativity. Accordingly, existing creativity literature has well documented compelling empirical evidence that creative self-efficacy can facilitate creativity (e.g., Gong, Huang, & Farh, 2009; Tierney & Farmer, 2002, 2011). Although this work has not examined creativity as two different types (for exception, see Jaussi & Randel, 2014), we have sufficient theoretical reasons to expect that, with such creativity-specific confidence, employees are more likely to exhibit incremental and radical creativity. Therefore, we hypothesize the following:

Hypothesis 3: Follower creative self-efficacy is positively related to follower incremental creativity.

Hypothesis 4: Follower creative self-efficacy is positively related to follower radical creativity.

Taken together, being open to upward influence, empowering leaders tend to release and foster follower expertise power, which in turn contributes to follower development of greater self-efficacy for creativity and the generation of incremental and radical creative ideas. In sum, we predict that follower expertise power and creative self-efficacy would sequentially carry the effect of empowering leadership on follower incremental and radical creativity. Thus, we hypothesize the following:

Hypothesis 5: Follower perceptions of expertise power and follower creative self-efficacy sequentially mediate the positive relationship between empowering leadership and follower incremental creativity.

Hypothesis 6: Follower perceptions of expertise power and follower creative self-efficacy sequentially mediate the positive relationship between empowering leadership and follower radical creativity.

The moderating role of power distance orientation

As individually held power-relevant values operate as perceptual filters and standards for framing and evaluating external events, followers may differ in response to empowering leadership. We propose that power distance orientation, defined as an individual's belief regarding the appropriate power difference in leader-follower relationships (Hofstede, 2001; Kirkman et al., 2009), moderates the extent to which employees gain a sense of expertise power from their leaders' empowering behaviors. To be specific, we expect followers who prefer a lower over a higher power distance to perceive higher expertise power in response to empowering leadership.

As employees with high power distance orientation tend to accept power inequality between leaders and followers, they prefer to maintain a safe distance from their leader rather than stepping outside the subordinate roles (Chen & Aryee, 2007; Kirkman & Shapiro, 2001). When leaders encourage them to provide their own input in decision-making and task completion, they might feel reluctant to accept such activities that originally fell within the managerial domain of the leader (Kirkman & Shapiro, 1997; Kirkman et al., 2009). Hence, induced by their submissive tendencies to authority figures, followers high in power distance

orientation may experience incompatibility and incongruence between their inner value orientations and an empowering leadership style.

In contrast, employees with low power distance orientation are likely to endorse the egalitarian values that advocate reciprocal exchange and mutual influence in leader-follower relationships. Although these employees acknowledge the authority typically ascribed to leaders owing to role difference, they believe that both leaders and followers possess distinct resources that can be used to invest in the exchange relationships with one another (Wilson, Sin, & Conlon, 2010; Foa & Foa, 1980). As such, empowering leaders offer power, confidence, and discretion to such followers; in return, followers provide work-related knowledge, skills, and abilities to their leader. Because of this reciprocal exchange, low-power-distance followers feel allowed to exert influence on their leaders in work affairs based on their own expertise. Thus, as internal power values are in line with the nature of empowering leadership, those lower in power distance orientation are more likely to develop a higher sense of expertise power in relation to their leader.

This moderating role proposed for power distance orientation is well grounded in the literature. Extensive empirical research has shown that power distance values operate as a boundary condition of the effects of leadership on employees' responses (e.g., Botero & Van Dyne, 2009; Kirkman et al., 2009; Lee, Pillutla, & Law, 2000). Notably, Chen and Aryee (2007) found Chinese traditionality (i.e., the extent to which an individual endorses the traditional hierarchical role relationships as prescribed by Confucian social ethics), a cultural value adjacent to power distance orientation, to negatively moderate the influence of delegation on employee perceived insider status. Based on this empirical evidence and the above reasoning, we hypothesize the following:

Hypothesis 7: Follower power distance orientation moderates the positive relationship between empowering leadership and follower perceptions of expertise power such that this relationship is stronger for followers lower, rather than higher, in power distance orientation.

Integrated models for incremental and radical creativity

Our earlier hypotheses (Hypotheses 1, 2, 3, 4, 5, and 6) have suggested that the paths from empowering leadership to incremental and radical creativity are sequentially mediated by follower expertise power and creative self-efficacy. Taking into account the moderation hypothesis (Hypothesis 7), we further predict that these two three-path indirect relationships are conditional on follower power distance orientation for the path from empowering leadership to follower expertise power. In sum, we propose two moderated mediation models to clarify why empowering leadership can facilitate follower incremental creativity and radical creativity (first through follower expertise power and then creative self-efficacy) and under what condition (when followers have a low level of power distance orientation) the mediated relationships are more pronounced. Accordingly, we formulate two additional hypotheses to test moderated mediation models for incremental and radical creativity.

Hypothesis 8: The indirect relationship between empowering leadership and follower incremental creativity through follower perceptions of expertise power and follower creative self-efficacy is conditional on follower power distance orientation such that this indirect relationship is more pronounced for followers lower, rather than higher, in power distance orientation.

Hypothesis 9: The indirect relationship between empowering leadership and follower radical creativity through follower perceptions of expertise power and follower creative

self-efficacy is conditional on follower power distance orientation such that this indirect relationship is more pronounced for followers lower, rather than higher, in power distance orientation.

METHOD

Participants and procedure

The present study was conducted in an academic institution dedicated to the natural science in China.¹ Employees and their direct supervisors from 80 scientific groups across different disciplines (e.g., chemistry, biology, geography, computer science, and engineering) were invited to participate in the survey. Group meetings were organized to inform participants about the research purpose and procedures and to emphasize anonymity. Questionnaires were administered to employees in order to assess their perceptions of empowering leadership, sense of expertise power, creative self-efficacy, and power distance orientation. In addition to these self-report data, these employees' direct leaders rated their suggestions of incremental and radical creative ideas. Each questionnaire was coded by an identification number to pair employees' responses with their leaders' evaluations.

A total of 493 follower-leader dyads were approached. Of these 493 dyads, 325 usable responses were obtained, resulting in a response rate of 65.92%. These 325 followers were nested within 69 leaders; the number of followers evaluated by each leader varied from three to seven, with an average of 4.71 per leader. However, 47 followers did not complete the demographic section of the survey. Because these followers did respond to study variables, we

¹ This study used the same sample reported in Chapter 2 although different research questions and hypotheses were addressed in these two studies. The only overlapping variables for these two studies are control variables and the dependent variables of incremental and radical creativity.

used multiple imputation procedure to impute the missing values on gender, age, education, and job tenure, enabling us to utilize the full information available in the sample.

Of the followers who had responded, 45.83% were female, and their mean age was 30.87 years (range = 22-59). Our sample was highly educated, with 3.15% of the followers having completed a bachelor's degree, 35.02% a master's degree, and 61.83% a doctorate degree. An average of job tenure was 5.18 years.

Measures

The scales used in the survey were translated from English into Chinese and then back-translated into English by two independent bilingual individuals to ensure equivalency of meaning (Brislin, 1980). Unless otherwise indicated, all measures used a seven-point Likert scale anchored at 1, “strongly disagree” and 7, “strongly agree.”

Empowering leadership. For empowering leadership ($\alpha = .93$), we used Ahearne et al.'s (2005) 12-item measure. The scale assesses four dimensions: fostering participation in decision making, enhancing the meaningfulness of work, expressing confidence in high performance, and providing autonomy from bureaucratic constraints. Because the subscales for the four dimensions are highly correlated, and consistent with previous research (e.g., Ahearne et al., 2005; Zhang & Bartol, 2010), we combined them into a single empowering leadership measure. A sample item is “My supervisor makes many decisions together with me.”

Follower expertise power. We adapted Hinkin and Schriesheim's original (1989) scale to measure followers' perceptions of expertise power within the relationship with their leader ($\alpha = .87$). A sample item is “I can provide my supervisor with needed technical knowledge.”

Follower creative self-efficacy. We used Tierney and Farmer's (2002) three-item scale to assess follower creative self-efficacy ($\alpha = .87$). A sample item is "I have a knack for developing new and practical ideas in the workplace."

Power distance orientation. An eight-item questionnaire taken from Earley and Erez (1997) was used to assess power distance orientation ($\alpha = .70$). A sample item is "Employees who often question authority sometimes keep their managers from being effective."

Follower incremental and radical creativity. Our measures for incremental and radical creativity were based on measures developed and established by Madjar et al. (2011). Using a 7-point Likert scale ranging from 1 ("never") to 7 ("always"), supervisors rated the frequency that employees suggested incremental and radical creative ideas to them. A sample item for incremental creativity is "This employee suggests small adaptations to the existing ways of doing things." A sample item for radical creativity is "This employee suggests very original solutions to existing problems." Cronbach's alpha coefficients were .92 for the incremental creativity scale, and .94 for the radical creativity scale.

Control variables. We controlled for gender (Baer & Kaufman, 2008), age (Lehman, 1960), educational level and job tenure (Tierney & Farmer, 2002), which are important predictors of creativity. We collected educational level with five categories ranging from 1 for "high school" to 5 for "Ph.D.". Responses predominantly fell into two of the five categories: master's degree (35.02%) and Ph.D. (61.83%). Thus, we recoded education into a dichotomous variable with 0 for "master's degree or less" and 1 for "Ph.D.". We believe this dichotomization is valid since postgraduate education contributes to the acquisition of additional domain knowledge base, problem-solving skills and further development of cognitive enhancement.

Analytical strategy

As leaders provided creative performance ratings for multiple followers and the values of the intraclass correlations (ICC_1) for incremental and radical creativity were substantial and statistically significant ($ICC_1 = .43, .44$, respectively; both $p < .05$), we had to take possible leader effects into account. To obtain unbiased parameter estimates and statistical inferences, we performed multilevel modeling in Mplus 7.4 (Muthén & Muthén, 1998-2012). We modeled the hypothesized relationships among the study variables at the individual level and allowed incremental creativity and radical creativity to have random intercepts at the leader level. Because the traditional resampling method (e.g., bootstrapping) cannot be applied to multilevel analyses and the sampling distribution of the indirect effect is skewed, especially in small samples, we implemented Monte Carlo simulation in R to test the significance of indirect effects (Selig & Preacher, 2008). All predictors were standardized in our analyses.

RESULTS

Confirmatory factor analyses

Prior to testing the hypotheses, we performed confirmatory factor analyses (CFAs) on all six constructs (two creativity dimensions and all predictor variables) to check the convergent and discriminant validity of all the variables involved. Using Mplus 7.4 (Muthén & Muthén, 1998-2012), we tested the focal six-factor model with all factors loading separately, which provided a reasonable fit, $\chi^2 [480] = 1379.24$, comparative fit index (CFI) = .86, Tucker-Lewis Index (TLI) = .84, and root-mean-square error of approximation (RMSEA) = .08, standardized root mean square residual (SRMR) = .06. As Table 3.1 demonstrates, the hypothesized six-factor model achieved significantly better fit than all other alternative models; $p < .001$ for all model

Table 3.1 Model fit results for confirmatory factor analyses

Model	χ^2	<i>df</i>	$\Delta\chi^2(\Delta df)$	CFI	TLI	RESEA	SRMR
1. Hypothesized six-factor model	1386.28	480		.86	.84	.08	.06
2. Five-factor model (follower expertise power and creative self-efficacy on one factor)	1776.99	485	$\chi^2(5)= 397.75^{***}$	.80	.78	.09	.07
3. Four-factor model (follower expertise power and creative self-efficacy on one factor, empowering leadership and power distance orientation on one factor)	2054.70	489	$\chi^2(9)= 668.42^{***}$	.75	.73	.10	.09
4. Three-factor model (follower expertise power and creative self-efficacy on one factor, empowering leadership and power distance orientation on one factor, incremental and radical creativity on one factor)	2645.54	492	$\chi^2(12)= 1266.30^{***}$	.66	.64	.12	.10
5. Two-factor model (employee-rated measures on one factor, leader-rated measures on one factor)	3053.22	494	$\chi^2(14)= 1673.98^{***}$	.60	.57	.13	.10
6. One-factor model	4143.66	495	$\chi^2(15)= 2764.42^{***}$	.42	.39	.15	.13

Note. $N = 325$. All alternative models were compared with hypothesized six-factor model. All $\Delta\chi^2$ are significant at $p < .001$.

Table 3.2 Means, standard deviations, and correlations

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Gender	0.46	0.50										
2. Age	30.87	5.51	.05									
3. Education	0.62	0.49	-.11*	.20**								
4. Job tenure	5.18	5.92	.15*	.84**	-.02							
5. Empowering leadership	5.29	0.84	-.06	-.04	.08	-.07	(.93)					
6. Power distance orientation	3.70	0.90	-.08	.05	-.06	.04	.02	(.70)				
7. Expertise power	5.25	0.91	-.14*	.08	.15**	-.02	.58**	-.06	(.87)			
8. Creative self-efficacy	4.92	1.00	-.17**	.10	.12*	.07	.26**	-.03	.35**	(.87)		
9. Incremental creativity	5.08	1.05	.06	.12*	.14*	.13*	.08	-.12*	.18**	.07	(.92)	
10. Radical creativity	4.65	1.27	-.17**	.04	.35**	-.01	.16**	-.01	.12*	.21**	.48**	(.94)

Note. $N = 325$. Cronbach's alpha coefficients are on the diagonal in parentheses. For gender, 0 = "male," 1 = "female."

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

comparisons. The results of these CFAs confirm the convergent and discriminant validity of our measures.

Descriptive statistics and correlations

Table 3.2 contains means, standard deviations, reliability coefficients, and correlations among the variables. Among the control variables, these demographics are all significantly related to at least one of the outcome variables, which justifies including them as controls (Becker, 2005). Notably, the magnitudes of the results were similar and the conclusions regarding the hypotheses remained the same when excluding these controls.

Testing main effects and mediation effects

To test the hypothesized main effects and mediation effects (i.e., Hypotheses 1-6), we first estimated a model (M1) that specified the effect of empowering leadership on incremental and radical creativity through follower expertise power and creative self-efficacy. The unstandardized coefficient estimates for M1 were summarized in Table 3.3.

Consistent with Hypothesis 1, empowering leadership was found to be significantly and positively related to follower perceptions of expertise power ($\gamma = .57, p < .001$). Further, follower expertise power was found to be significantly and positively related to creative self-efficacy ($\gamma = .27, p < .001$), thereby providing evidence for Hypothesis 2. To test Hypothesis 3 and Hypothesis 4, we then regressed incremental creativity and radical creativity on creative self-efficacy. The results showed that creative self-efficacy was indeed positively associated with radical creativity ($\gamma = .13, p < .05$), but not with incremental creativity ($\gamma = .04, ns$). Thus, support was found for Hypothesis 4, but not for Hypothesis 3.

To provide a direct test of the mediated effects proposed in Hypothesis 5 and Hypothesis 6, we implemented the Monte Carlo procedure to simulate the distribution of the product of path

Table 3.3 Unstandardized coefficients of Model 1 for testing main effects and mediation effects

Predictor	Follower expertise power		Follower creative self-efficacy		Follower incremental creativity		Follower radical creativity	
	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>
Gender	-.12*	.05	-.14*	.06	.03	.05	-.12*	.05
Age	.12	.08	-.08	.10	-.00	.11	-.04	.13
Education	.06	.05	.07	.06	.13**	.05	.30***	.07
Job tenure	-.04	.10	.16†	.09	.15	.10	-.01	.14
Empowering leadership	.57***	.06	.11	.09	-.02	.06	.10	.05
Follower perceptions of expertise power			.27***	.08	.15**	.07	-.00	.08
Follower creative self-efficacy					.04	.05	.13*	.06

Note. $N = 325$. † $p < .1$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3.4 Unstandardized coefficients of Model 2 for testing moderated mediation effects

Predictor	Follower expertise power		Follower creative self-efficacy		Follower incremental creativity		Follower radical creativity	
	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>
Gender	-.10*	.05	-.14*	.06	.03	.04	-.13	.06
Age	.13	.09	-.10	.10	.03	.10	-.03	.14
Education	.07	.05	.08	.06	.14*	.06	.30***	.08
Job tenure	-.05	.10	.20*	.10	.12	.10	.03	.14
Empowering leadership	.53***	.05	.10	.08	-.02	.06	.10†	.05
Follower power distance orientation (PDO)	-.09†	.05						
Empowering leadership × PDO	-.10†	.06						
Follower perceptions of expertise power			.26***	.07	.15*	.07	-.01	.08
Follower creative self-efficacy					.04	.05	.14*	.06

Note. $N = 325$. † $p < .1$. * $p < .05$. ** $p < .01$. *** $p < .001$.

coefficients. In line with Hypothesis 6, there was a significant positive indirect effect of empowering leadership on radical creativity via follower expertise power and creative self-efficacy (indirect effect = .02; CI = .002 to .039). No support was found for Hypothesis 5 predicting an indirect effect of empowering leadership on incremental creativity via follower expertise power and creative self-efficacy (indirect effect = .01; CI = -.010 to .024).

While creative self-efficacy was not related to incremental creativity, we unexpectedly noted that follower expertise power had a direct positive effect on incremental creativity ($\gamma = .15$, $p < .05$). Furthermore, an additional Monte Carlo mediation analysis revealed that the indirect relationship between empowering leadership and incremental creativity through expertise power was significant (indirect effect = .08; CI = .009 to .169).

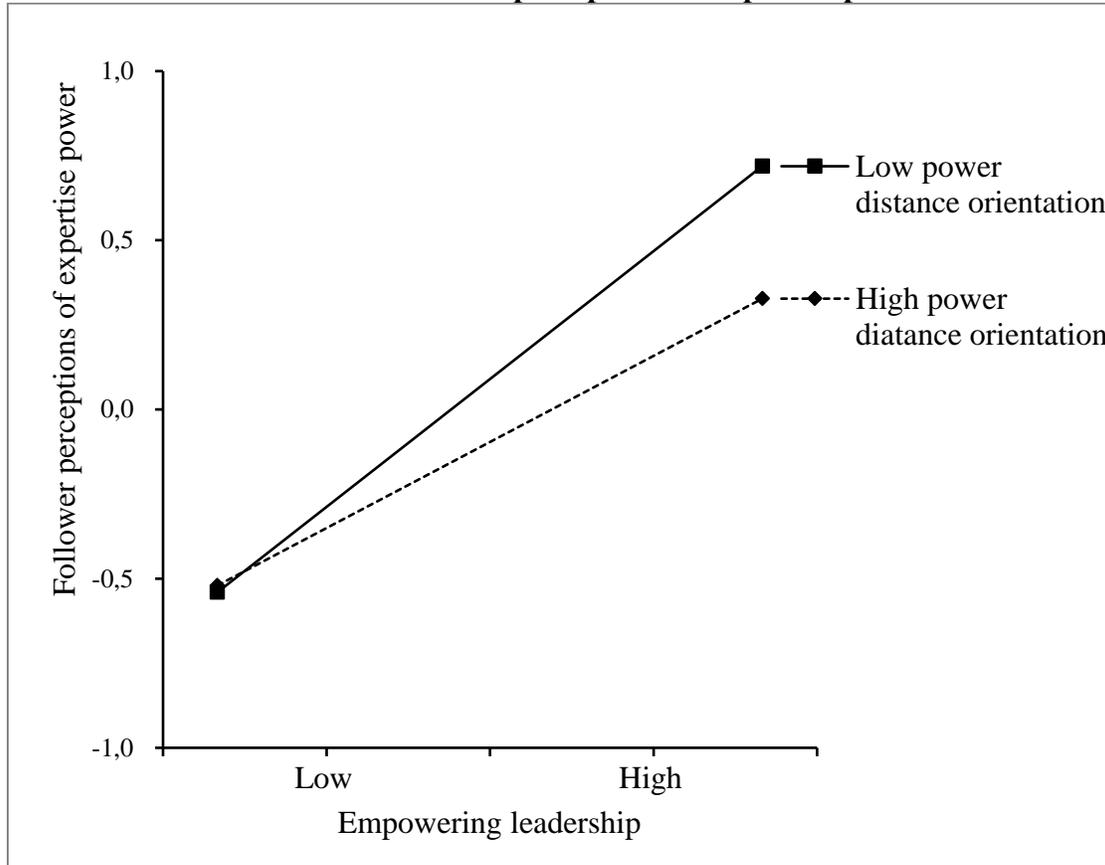
Testing moderation effects and moderated mediation effects

To test hypothesized moderation and moderated mediation effects (i.e., Hypotheses 7, 8, and 9), we estimated a model (M2) on the basis of M1 by adding the interaction of power distance orientation and empowering leadership on follower expertise power. Table 3.4 presents the unstandardized coefficient estimates of M2.

Hypothesis 7 predicted that power distance orientation would moderate the relationship between empowering leadership and follower perceptions of expertise power. As shown in Table 3.4, the interaction term between empowering leadership and power distance orientation was marginally significant related to follower expertise power ($\gamma = -.10$, $p < .10$). As Figure 3.2 illustrates, empowering leadership was strongly significantly and positively related to expertise power ($\gamma = .63$, $p < .001$) for followers with low power distance orientation (M - 1SD), while this relationship ($\gamma = .42$, $p < .001$) was less pronounced for those with high power distance orientation (M + 1SD). Due to the directional nature of the moderation hypothesis, one-tailed test

of significance applies. It is appropriate to interpret the marginally significant result as providing evidence for Hypothesis 7.

Figure 3.2 The interaction effect of empowering leadership and follower power distance orientation on follower perceptions of expertise power



Previous results have indicated that the paths from empowering leadership to incremental and radical creativity, respectively, were different, with expertise power acting as one single mediator for incremental creativity, and expertise power and creative self-efficacy acting as sequential mediators for radical creativity. Accordingly, we tested a two-path moderated mediation model for incremental creativity, and a three-path moderated mediation model for radical creativity. We again used Monte Carlo approach to construct confidence intervals for indirect effects of empowering leadership on incremental creativity via follower expertise power at higher (+1 SD) and lower levels (-1 SD) of follower power distance orientation. With 20,000

Monte Carlo replications, we found that the mediational process through which empowering leadership influenced incremental creativity through follower expertise power was more pronounced for followers with low power distance orientation (indirect effect = .09; CI = .011 to .184) than for those with high power distance orientation (indirect effect = .06; CI = .006 to .138). Likewise, the three-path mediation chain that linked empowering leadership to radical creativity through follower expertise power and creative self-efficacy was more salient for low power-distance-orientation followers (indirect effect = .02; CI = .004 to .043) than for high power-distance-orientation followers (indirect effect = .01; CI = .003 to .032). Thus, these findings supported Hypothesis 9. Although no support was found for Hypothesis 8, it is interesting to note that low power distance orientation strengthened the indirect relationship between empowering leadership and incremental creativity via follower expertise power.

DISCUSSION

The aim of the current study was to deepen our understanding of why, when, and how empowering leadership nurtures follower incremental and radical creativity by taking a social power perspective. Using data collected from leader-follower dyads in a nonprofit scientific institution in China, we found that empowering leadership elicited higher levels of follower expertise power, which directly facilitated incremental creativity and indirectly facilitated far-reaching radical creativity through creative self-efficacy. Moreover, we argued and showed that empowering leadership had a stronger influence on follower expertise power when followers hold a lower power distance orientation. Finally, we found evidence for our moderated mediation models: empowering leadership had an indirect effect on incremental creativity through follower expertise power, and this indirect effect is stronger for those scoring low on power distance orientation; empowering leadership had an indirect effect on radical creativity first through

follower expertise power and then creative self-efficacy, and this indirect effect is also strengthened by low levels of power distance orientation.

Theoretical implications

This study clearly contributes to the literature in three important aspects. First, previous research has primarily focused on an intrinsic motivation approach to disentangle the effects of empowering leadership on follower creativity by highlighting the importance of follower psychological empowerment and intrinsic motivation (Chen et al., 2011; Harris et al., 2014; Zhang & Bartol, 2010; Zhang & Zhou, 2014). We considered empowering leadership in terms of its inherent relational dynamic (Conger & Kanungo, 1988; Vecchio et al., 2010) and drew on social power theory (French & Raven, 1959) to identify follower sense of expertise power as the specific power base that empowering leadership actually transfers to followers. Moreover, by examining follower expertise power and creative self-efficacy as sequential mediators in the link between empowering leadership and radical creativity, we not only complemented the motivational approach but also integrated it with our power sharing perspective. Creative self-efficacy reflects intrinsic motivation because efficacy beliefs imply perceptions of self-competence (Deci & Ryan, 2000) which intrinsically motivate employees to engage in creative courses of action (cf. Gong et al. 2009).

Second, we especially contribute to the emerging stream in creativity literature empirically examining potentially differential effects of personal and contextual factors on incremental and radical creativity (Gilson et al., 2012; Gilson & Madjar, 2011; Jaussi & Randel, 2014; Madjar et al., 2011). Whereas past research has only examined the relationship of empowering leadership with a broad and general measure of creativity (Chen et al., 2011; Harris et al., 2014; Zhang & Bartol, 2010; Zhang & Zhou, 2014), the present study has separated

creativity into two dimensions and found that the mediational processes from empowering leadership to incremental and radical creativity were, in fact, different, with expertise power acting as one single mediator for incremental creativity, and expertise power and creative self-efficacy acting as sequential mediators for radical creativity. This pattern of results suggest that incremental creativity is a direct behavioral manifestation of expertise power, whereas the successful development of radical creativity requires the proximal motivational force of self-efficacy beliefs specifically targeting at creativity. This seems to suggest that enhanced level of expertise power is sufficient to facilitate incremental creativity because the development of incremental ideas is thought to occur through extensions of the established framework of thoughts and routines or adaptive improvements on how things are currently done (Audia & Goncalo, 2007; Dane, 2010). In contrast, given that radical creative ideas are difficult to develop and involve greater risk of failure (Venkataramani et al., 2014), employees need firm beliefs in their creative capabilities to avoid premature quit before radical breakthrough ideas emerge.

Finally, the current findings advance knowledge of the boundary conditions for when empowering leadership boosts employee incremental and radical creativity more effectively. Building on the role of power-related values in the empowerment literature (Kirkman et al., 2009; Kirkman & Shapiro, 1997, 2001), we found that power distance orientation moderates the indirect relationships between empowering leadership and incremental creativity (through follower expertise power) and radical creativity (first through follower expertise power and then creative self-efficacy). Although followers who held high power distance values were supposed to be reverential towards their superiors and constrained by role requirements as followers, the findings reveal that such employees also responded to empowering behavior from their leaders

by experiencing elevated level of expertise power as well, albeit to a lower extent than low power distance followers.

Practical implications

Our results provide some practical implications with regards to the use of empowering leadership to stimulate follower incremental and radical creativity. First, our findings suggest that empowering leadership could be an effective way to develop employees' capacities to think creatively by enhancing their perceptions of expertise power. This implies that managers should develop empowering leadership skills, such as involving followers in decision making, and providing sufficient autonomy, confidence, and information to their followers. Organizations interested in fueling employee creativity may find it useful to implement leader selection and training on the basis of empowering leadership skills.

Second, given that the process mechanisms for incremental and radical creativity are different, managers can be more effective in motivating the desired form of creativity by stimulating the right generation process for incremental or radical creativity. When incremental creativity is valued, managers can provide employees more opportunities to deepen their knowledge base and encourage continuous refinements or extensions of the existing framework. Due to the necessity of creative self-efficacy for radical creativity, managers should particularly help employees to build up their confidence in creative capabilities when radical creativity is needed.

Third, the moderating role of power distance orientation in the effects of empowering leadership on follower expertise power suggests that managers should not assume all followers will react to their empowering behavior to the same degree, at least at a given point in time. Managers may find that followers with lower power distance beliefs are more receptive to their

empowerment efforts. For followers holding a high power distance orientation, managers could initially delegate limited power and gradually increase the extent of empowerment. Hence, it is advisable for managers to calibrate employees' readiness to be empowered and determine what extent of empowerment is desirable for different employees.

Limitations and directions for future research

Some limitations associated with our research design need to be addressed. First, because of the cross-sectional design, causal inferences of the relationships among our study variables cannot be fully substantiated. This limitation precludes us from ruling out the possibility of reversed and reciprocal causality. With this caveat in mind, longitudinal studies over multiple time points are needed in order for the causal influence to be determined with more certainty. Second, with the exception of incremental and radical creativity, all of the other variables were measured through self-reports. Despite the appropriateness of using self-reports to measure internal perceptions and values such as those in our study, there is the potential that the common method from which they were derived artificially inflated the demonstrated relationships. However, because we have demonstrated differential pattern of relationships from empowering leadership to incremental and radical creativity and the moderation effect of power distance orientation, we are confident that common method variance is unlikely to have biased our results. Third, our data were collected from a scientific research institute in China. To generalize and extend the theory proposed and results reported in the present study, future research should investigate the generalizability of our findings and conclusions to other industries, jobs and cultural contexts.

The present study also opens up several possibilities that might be worthwhile for future research to examine. First, as creative idea generation is the initial stage of an innovation process

(cf. Kanter, 1988), we did not capture the effects of empowering leadership on the various stages of innovation in light of the power sharing perspective. Innovation in organizations comprises of idea generation, development, champion, and implementation and is often characterized by a social-political process (Perry-Smith & Mannucci, 2017). Future studies could consider investigating how perceptions of expertise power might help employees to navigate the subsequent journey from novel ideas to tangible outcomes. Second, while our work was focused on followers' expertise power in reference to immediate leaders, work group peers can serve as alternate reference groups for expertise power. It has been noted that aligning team members' relative power within teams with situationally-relevant expertise can enhance team creativity (Aime, Humphrey, DeRue, & Paul, 2013). Therefore, it seems fruitful to continue this line of work and examine expertise power dynamics in teams. Finally, although we adopted an employee perspective to examine the consequences of empowering leadership, it is just as important to address how leaders are affected by such empowerment practice. As power in organizations is not a zero-sum quantity (Tannenbaum, 1968), leaders might also expand their roles and be freer to engage in more value-added activities. Additional inquiry into the follow-up effects on leaders in terms of their reputation and effectiveness may be worthwhile to truly dispel the concern of some managers that expanded power on the part of employees would undermine their authority.

Conclusion

The present research offers an integrative understanding of mediating mechanisms and contingencies in the relationship between empowering leadership and follower incremental and radical creativity. Importantly, we identify follower expertise power as a single mediator to explain why empowering leadership promotes follower incremental creativity. In contrast, the

indirect effect of empowering leadership on radical creativity is mediated first by follower expertise power and then creative self-efficacy. Such differential mechanisms for incremental and radical creativity suggest that empowering leadership can promote both incremental and radical creativity within an individual's work but through different generation processes. Further, we found these mediated relationships to be conditional on follower power distance orientation for the path from empowering leadership to follower expertise power. We hope these findings will stimulate further research on power dynamics in empowerment processes and help organizations and managers to boost employee creativity through empowerment intervention.

