Empowering leadership and employee creativity: A dual-mechanism perspective

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Integrating empowerment and creativity theories, this study simultaneously explores the context-specific (i.e., access to resources [AR] and access to information [AI]) and actor-related (i.e., organization-based self-esteem [OBSE]) mechanisms in the relationship between empowering leadership and employee creativity. Furthermore, drawing on the interactionist perspective of creativity, it examines how AR and AI may interact with OBSE to influence creativity. Multisource data were collected from 217 employees and their supervisors using a three-wave, time-lagged research design. The results reveal that OBSE and AR mediate the relationship between empowering leadership and creativity. Moreover, AR moderates the relationship between OBSE and creativity, such that this relationship is significant only when AR is high. Theoretical and practical implications of these findings are discussed.

Practitioner points

- Empowering leaders may stimulate creativity by impacting their employees’ OBSE and access to resources.
- A possible way for leaders to facilitate creativity is to simultaneously promote employees’ OBSE and provide them with the necessary resources.

As today’s organizations face an increasingly competitive external environment, creativity – defined as the generation of novel and useful ideas – is being increasingly emphasized as a means to stay ahead of the competition and ensure organizational success (Amabile, 1983; George, 2007). Consequently, organizational scholars have been seeking to understand the antecedents of creativity. Perhaps one of the most important forerunners of creativity is leadership behaviour (Mainemelis, Kark, & Epitropaki, 2015; Mumford, Scott, Gaddis, & Strange, 2002; Shalley & Gilson, 2004). Recently, the concept of empowering leadership has attracted increasing attention in the creativity literature. Empowering leadership denotes leaders’ deliberate behaviours to share power with employees and to provide them with additional responsibility for and control over their

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DOI:10.1111/joop.12219

Researchers have also attempted to reveal the mechanisms through which empowering leadership enhances employee creativity. In two different studies, Zhang and colleagues found that the positive effects of empowering leadership on creativity are mediated by such personal factors as employees' psychological empowerment (Zhang & Bartol, 2010) and creative self-efficacy (Zhang & Zhou, 2014). Nevertheless, researchers have yet to fully elucidate how empowering leadership may affect context-specific factors, which are also crucial in facilitating creativity.

Woodman, Sawyer, and Griffin (1993) proposed the interactionist model of creativity, which suggests that employee creativity is a complex product of the interactions between personal attributes and contextual variables. Similarly, Amabile (1983) proposed that creativity is a behaviour resulting from certain constellations of personal and contextual factors. To our knowledge, however, researchers have not explored both context-specific and actor-related mechanisms simultaneously in the relationship between leadership and creativity. To fill this gap in the literature, this study aims to investigate how empowering leadership can promote employee creativity through two parallel mechanisms: the context-specific and actor-related mechanisms.

With regard to the context-specific mechanism, we focus on instrumental support, which refers to the task-oriented support provided by leaders, including access to information (AI) and access to resources (AR; Amabile, Schatzel, Moneta, & Kramer, 2004; Spreitzer, 1996). Access to information refers to the extent to which employees have information about the goals, vision, and strategies of the organization. Access to resources refers to the extent to which employees have the materials, space, funds, and time necessary to effectively carry out their work responsibilities (Spreitzer, 1996). AI and AR are two important characteristics of an empowering work context (Spreitzer, 1996). Amabile's (1988, 1996) componential theory of creativity proposes that employees' perceptions of their work environment are largely created by the support from their immediate supervisor. As empowering leadership, by definition, seeks to create an empowering environment for employees, it makes logical sense to focus on empowering leadership as the antecedent of AI and AR (Sharma & Kirkman, 2015).

With regard to the actor-related mechanism, we focus on employees' organization-based self-esteem (OBSE). Self-esteem refers to an individual's overall evaluation of his or her competencies (Rosenberg, 1965). Tharenou (1979) was among the first to apply the concept of self-esteem to the work setting. Drawing on Tharenou's work, Pierce, Gardner, Cummings, and Dunham (1989) subsequently introduced the concept of OBSE, which they defined as the degree to which an individual believes himself or herself to be capable, significant, and worthy as an organizational member. The predominant feature of OBSE is that it underscores the employee's perceived competence within his or her employing organization. As a consequence, it holds great potential for aligning the behaviours of the employee with the behaviours valued by the focal organization (Korman, 1976, 2001; Pierce et al., 1989).

Researchers (Shalley & Gilson, 2004; Zhou & Hoever, 2014) have called for more studies to explore how actor-level factors might operate in conjunction with context-specific factors to influence individuals' creativity. Thus, this study also aims to explore the interaction effects of each of the two instrumental factors (i.e., AR and AI) and OBSE on employee creativity. Such interactions are of theoretical importance because employees...
with high OBSE may not be able to demonstrate individual creativity if they lack necessary information or sufficient resources. Figure 1 presents our conceptual model.

Our study makes three theoretical contributions to the extant research. First, we contribute to the creativity literature by exploring both context-specific (i.e., AR and AI) and actor-level mechanisms (i.e., employee OBSE) simultaneously in the relationship between empowering leadership and creativity. Although recent research on creativity has begun to consider both context-specific and actor-related factors at the same time (Zhou & Hoever, 2014), this study is among the first to treat these factors as two parallel mechanisms. Our model pursues an innovative angle by integrating these actor-centred and context-centred perspectives within creativity research.

Second, we contribute to the empowering leadership literature by broadening the understanding of the effects of this leadership style on followers. Researchers have reported the positive effects of empowering leadership on a variety of followers’ attitudes and behaviours (e.g., Harris, Li, Boswell, Zhang, & Xie, 2014; Raub & Robert, 2010; Tuckey, Bakker, & Dollard, 2012). Nevertheless, we are not aware of any studies that have revealed the possible effects of empowering leadership on followers’ self-evaluation. As prior studies (Shamir, House, & Arthur, 1993; van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004) have demonstrated that leadership behaviour can largely influence how employees view themselves, this study aimed to explore the effect of empowering leadership on the self-view of employees, as represented by their OBSE.

Third, we extend the interactionist perspective of creativity by investigating the joint effects of AR/information and OBSE on creativity. The interactionist perspective argues that both the main effects of personal and contextual factors and their interactions are vital to obtain a holistic understanding of employee creativity. By considering the effects of OBSE and instrumental support simultaneously, we aim to elucidate in fuller detail why and when empowering leadership may promote individual creativity.

**Theory and hypotheses**

**Empowering leadership and OBSE**

Organization-based self-esteem indicates the extent to which organizational members believe themselves to be capable, meaningful, effectual, and worthwhile individuals.
within their employing organizations (Pierce et al., 1989). Self-concept–based leadership theory (Shamir et al., 1993) proposes that leadership behaviour may have a profound impact on followers’ self-evaluation and self-concepts. As a result, it is of theoretical importance to explore the effect of leadership behaviour on employees’ OBSE (Chan, Huang, Snape, & Lam, 2013; Yang, Zhang, Kwan, & Chen, 2018). According to the OBSE literature (Pierce & Gardner, 2004), an employee’s OBSE may be influenced by three factors: (1) the employee’s work environment; (2) messages sent from significant others (e.g., immediate leaders) in the work setting; and (3) the employee’s feelings of efficacy and competence. We argue that empowering leadership may have positive effects on followers from all three of those aspects.

Regarding the first factor, Pierce et al. (1989) theorized that the work environment may lead to higher levels of OBSE if it is less structured and provides employees with greater opportunities to express themselves in their organizational roles (Pierce & Gardner, 2004). Similarly, self-concept–based theory argues that employees’ self-esteem is based on “the sense of competence, power, achievement, or ability to cope with and control one’s environment” (Shamir et al., 1993, p. 580). Leaders play a crucial role in shaping the work environment experienced by their employees. By definition, empowering leaders purposefully remove behaviour controls or bureaucratic constraints imposed on their followers, and provide them with more autonomy for employees’ self-expression (Ahearne et al., 2005). Such an empowering environment shaped by the leader may give a greater sense of self-control to the employees and result in higher levels of OBSE.

In relation to the second factor (i.e., messages from significant others), an employee’s OBSE is, in part, a social construction, meaning that it is moulded by the messages about the self sent by significant others who evaluate the employee’s work (Korman, 1971). Empowering leaders express confidence in their employees’ abilities and involve their employees in the decision-making process. Such behaviour conveys a clear signal to the employees that they are considered trustworthy, capable, and competent members of the organization (Gardner, Dyne, & Pierce, 2004; Spreitzer, 2008). When employees incorporate such positive messages into their self-evaluation, their OBSE will be correspondingly higher.

Finally, regarding the third factor (i.e., the employee’s feeling of efficacy and competence), it has been suggested that OBSE originates in part from the employees’ personal experiences (Korman, 1971). Due to the encouragement from their empowering leader, those employees are more likely to feel efficacious and competent in their capabilities. Furthermore, empowering leaders communicate the meaningfulness of the work to their employees, thereby helping them understand how their work contributes to the goals and success of the company. Such understanding enhances the employees’ self-perceived importance and worth within the organization and concomitantly boosts their OBSE (May, Gilson, & Harter, 2004). When all of these factors are taken together, it is reasonable to argue that empowering leadership may enhance employees’ OBSE.

**OBSE and creativity**

We expect OBSE to be positively related to creativity for two reasons. First, according to self-verification theory, people are motivated to verify and sustain their existing self-concepts (Swann, 1983). In a similar vein, self-consistency theory (Korman, 1970) suggests that individuals will engage in behaviours that reinforce their self-perception. Consequently, high-level OBSE serves as a self-regulatory system that guides individuals to
execute behaviours consistent with their self-perception in the organization (Lapointe, Vandenberghe, & Panaccio, 2011). Thus, people with high OBSE will be more motivated to achieve goals and seek approval from others (Pierce & Gardner, 2004). Creativity is one of the most valued processes within the organization; it requires extensive knowledge and cognitive abilities to execute successfully (Reiter-Palmon & Illies, 2004). Employees with high OBSE will be more willing to take on the challenges and engage in more creative behaviours, in keeping with their higher self-perceived competence and capabilities (Chen & Aryee, 2007).

Second, according to the approach/avoidance framework (Elliot & Thrash, 2002), employees with high OBSE are more sensitive to positive information and are inclined to adopt goals that compel them to pursue positive outcomes (Ferris et al., 2011; Judge, Bono, Erez, & Locke, 2005). In addition, they tend to have a strongly positive view of themselves and possess higher levels of self-confidence (Baumeister, Tice, & Hutton, 1989). In turn, they are less concerned about avoiding failures or negative outcomes and are more inclined to embrace uncertainty and take risks in the process of generating and testing creative ideas (Ferris et al., 2011). They also proactively seek out challenges that facilitate learning and acquisition of new knowledge and skills, which then enhance their creativity (Gong, Huang, & Farh, 2009).

Third, as OBSE reflects an individual’s self-perceived competence in an organization, employees with high OBSE tend to have a strong sense of competence and believe that they are able to make valuable contributions to the organization (Pierce et al., 1989). In addition, employees with high OBSE perceive themselves as important and worthwhile in their organization, so they are likely to feel as although they have more autonomy and greater control over their work behaviour. According to the cognitive evaluation theory (Deci & Ryan, 1980), the feelings of competency and autonomy are antecedents for intrinsic motivation. Thus, employees with high OBSE are more likely to enjoy high levels of intrinsic motivation in regard to their work (Pierce & Gardner, 2004), which enables them to generate creative ideas (Amabile, 1996; Grant, 2008; Grant & Berry, 2011; Zhang & Bartol, 2010). Accordingly, we propose:

**Hypothesis 1:** OBSE mediates the positive relationship between empowering leadership and creativity.

**Empowering leadership and access to resources/information**

Empowering leaders try to create a work context wherein employees’ autonomy and work meaningfulness can be supported and bolstered. Employees’ AR and AI are important characteristics of such an empowering work context, because they facilitate the work process for employees and improve the effectiveness of their efforts (Spreitzer, 1996). We argue that empowering leaders make several types of deliberate efforts to provide employees with access to needed resources and information.

First, empowering leaders strive to assure employees’ autonomy and remove bureaucratic constraints from their daily work (Ahearne et al., 2005). Accordingly, employees are provided with sufficient resources so that they have the necessary discretion and freedom to decide the time, pace, and method of completing their work (Martin et al., 2013).

Second, empowering leadership behaviours include delegating authority to employees and providing them with additional responsibility over their own work and decision-making (Hollander, 2009). To help employees handle this extra responsibility effectively,
Empowering leaders offer the necessary support for those efforts, including resources and information (Martin et al., 2013).

Third, by definition, empowering leaders involve employees in the decision-making process and highlight the significance of their work by relating their work to the larger goals of the company (Ahearne et al., 2005; Martin et al., 2013). These behaviours ensure that employees have access to critical organizational information, such as goals, strategies, and vision of the company.

Access to resources and creativity

We argue that AR will increase employees' creativity through several avenues. First, according to the sense-making perspective on creativity (Madjar, Greenberg, & Chen, 2011), availability of resources may serve as a signal that creativity is both allowed and encouraged in the organization (Weick, 1995). Such interpretation of the situation may propel those employees to engage in more creative endeavours, so as to meet the organization’s expectations. In contrast, constrained or limited resources may facilitate the opposite interpretation of the situation – that is, it may engender the belief that creativity is neither supported nor encouraged in the organization. Such interpretation may motivate employees to focus on routine performance rather than creative performance (Madjar et al., 2011).

Second, the development of new ideas is a time-intensive and demanding undertaking, so the employees must allocate their time and energy more effectively when they engage in creativity-related activities (Mumford & Hunter, 2005). When sufficient resources are available, employees do not have to spend their time and energy on searching for or requesting more resources from their organization. Instead, they can fully concentrate on the task at hand, engage in in-depth thinking, and put forth creative ideas without worrying about external constraints due to the lack of necessary resources (Caniëls, De Stobbeleir, & De Clippeleer, 2014; Unsworth & Clegg, 2010).

Third, resources may facilitate development of a capability belief within employees, referring to the degree to which an individual feels able to undertake creative action (Ford, 1996). Although Ford (1996) argued that capability belief was determined by an employee’s evaluation of his or her own abilities, Unsworth and Clegg (2010) found that such belief also depends on the resources available to the employee. When resources are constrained, the employee may not be able to test out or implement the creative ideas he or she has generated, which will dampen the individual’s capability belief (Madjar et al., 2011). In contrast, when sufficient resources are available, the employee will have more opportunities and greater latitude to accomplish creative initiatives. As a result, the employee may develop a sense of internal control and autonomy in his or her creative endeavours and may experience a higher level capability belief for creativity. Thus, we propose:

Hypothesis 2: Employees’ access to resources mediates the relationship between empowering leadership and creativity.

Access to information and creativity

Access to information is expected to enhance employee creativity for several reasons. First, when employees have access to the information of the organization, they have a better idea of the organization’s work flow, productivity, competition, and strategy...
Such critical information gives employees a comprehensive and holistic understanding of the urgent needs and problems of the organization – an understanding that may serve as the foundation of their proactive and constructive creative behaviours (Grant & Berry, 2011). Consequently, the well-informed employees are more likely to propose creative ideas that are aligned with the goals and mission of the focal organization and have the potential to benefit its future development in an increasingly competitive environment (Baer, 2012; Zhou & Shalley, 2011).

Second, with the organizational information in mind, employees will be more responsive and effective in identifying creative opportunities and will have a clearer idea of where to start. When employees are able to construct and perceive the problem in multiple ways in terms of organizational goals and needs, they are more likely to generate ideas that are of great importance and relevance to the organization (Reiter-Palmon & Illies, 2004).

Third, the creativity literature has emphasized the importance of non-redundant information or knowledge to employee creativity (Perry-Smith, 2006, 2014). Information about the organization’s strategy, vision, and goals is distinct from and does not overlap with employees’ task expertise, so it represents important non-redundant information in this context. Such information is likely to enrich the employees’ knowledge domain and enable them to examine their tasks or challenges from different perspectives (Csikszentmihalyi, 1996; Glynn, 1996). As a result, the employees are more likely to engage in flexible thinking and to make new associations among existing concepts (Coser, 1975).

On the basis of this argument, we predict:

Hypothesis 3: Employees’ access to information mediates the relationship between empowering leadership and creativity.

The interaction effects of access to resources/information and OBSE on creativity

The interactionist perspective on workplace creativity posits that creativity is a function of actor-related factors, context-specific factors, and the interactions among the two (Amabile, 1983; Amabile et al., 2004; Shalley, Zhou, & Oldham, 2004; Woodman et al., 1993). This framework predicts that, aside from the main effects of personal and contextual factors, the interactions of these factors are crucial for researchers to obtain a complete understanding of individual creativity (Zhou, Shin, & Cannella, 2008). Indeed, the relationships between personal factors and creativity may be magnified or attenuated in the presence of certain contextual factors (see Zhou & Hoever, 2014, for a review).

We propose that AR will moderate the relationship between OBSE and creativity, for several reasons. First, given that the development of creative ideas requires intensive resource input, sufficient resources can act as a supportive force in facilitating the creative process (Richter, Hirst, van Knippenberg, & Baer, 2012). When resources such as space, funds, time, and materials are readily available, employees with high OBSE will be better prepared to explore new possibilities and test alternative solutions. Ultimately, this experimentation process is likely to improve the effectiveness of employees’ creative efforts.

Second, according to Vroom’s (1964) expectancy theory, individuals’ behavioural efforts are based on the availability of required resources as well as their confidence and capabilities in using these resources. Therefore, when employees with high OBSE are equipped with sufficient resources, they will be more strongly motivated to devote more time and energy to their work. The application of this increased time and energy, in turn,
will help them deal with challenging and complex tasks with greater confidence and generate more creative ideas from their work (Gagné & Deci, 2005).

Third, the perceived adequacy of resources may affect employees’ beliefs about the internal value and meaningfulness of their work, aside from its practical implications (Amabile, 1996). Employees’ perceived value of their work, combined with their OBSE, may increase their interest in and enjoyment of their work. Such a positive state of mind at work will consequently spark employees’ cognitive flexibility and openness to complexity, and eventually expand their generation of creative ideas and novel solutions (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008). This understanding leads to our next hypothesis:

**Hypothesis 4:** Access to resources moderates the positive relationship between OBSE and creativity, such that the relationship is stronger when access to resources is high.

We also predict that AI will moderate the relationship between OBSE and creativity, for two reasons. First, when employees with high OBSE have AI, they will tend to take an organization-oriented view while developing their preliminary ideas (Bowling, Eschleman, Wang, Kirkendall, & Alarcon, 2010). As such, those creative ideas are more likely to directly address the problems of the organization and be assessed by the supervisor as useful, thereby resulting in more novel and useful solutions (Baer, 2012; Zhou & Shalley, 2011). Second, AI about the organization’s work flow, goals, and strategy will help employees better understand their own roles within the organization’s operations. While high OBSE instils in employees the confidence that they can contribute to the goals of the organization, AI helps them understand how they can contribute more effectively (Bowen & Lawler, 1992; Spreitzer, 1996). Thus, AI is expected to interact with employee OBSE to increase organizational members’ engagement in creative work. On the basis of these arguments, we hypothesize:

**Hypothesis 5:** Access to information moderates the positive relationship between OBSE and creativity, such that the relationship is stronger when access to information is high.

**Method**

**Participants and procedure**

Participants in this study were employees and their immediate supervisors working in five subsidiaries of a national petroleum company in mainland China. The company’s key business activities include the production, marketing, storage, and transportation of oil, natural gas, and chemical products. Creativity is one of the core values of the company and is highly encouraged by the human resources (HR) management practices of the company. In fact, creativity is one of the key performance indices for all employees and leaders in the company. Therefore, this company offers an appropriate context in which to study employee creativity.

Before commencing the survey, we contacted HR managers at the company’s headquarters and randomly selected 429 leader–follower dyads (the employees and their corresponding supervisors) to participate in our study. With the support of the HR specialist in charge of this survey, we delivered to each participant a small sealable envelope containing the questionnaire and a cover letter explaining the purpose and confidentiality of the study. A matched code was used to identify each employee’s response and that of the corresponding supervisor. After completing the survey, each
participant puts the questionnaire into the envelope and sealed it. The HR specialist then collected all the questionnaires and mailed them directly to the research team.

To minimize common method variance, we collected the data through three waves, occurring 2 months apart. In Wave 1, the employees provided information on their own demographics (e.g., age, gender, education), and their supervisor’s empowering leadership behaviour. In Wave 2, the employees reported their OBSE, AI, and AR. In Wave 3, the supervisors rated their employees’ creativity. In Wave 1, we received 276 employee questionnaires, yielding a response rate of 64.3%. Two months later (Wave 2), we distributed questionnaires to those 276 employees and obtained 254 employee responses, with a response rate of 92%. Two months after Wave 2 (Wave 3), we distributed questionnaires to the corresponding supervisors of the 254 employees who responded in Wave 2 and obtained 232 supervisor responses. After deleting incomplete cases, we obtained a total of 217 usable cases.

Of the 217 employees, 68.3% were male. In terms of their age, 23.0% were younger than age 30, 30.4% fell into the 31–35 age range, 30.0% were in the 36–40 age range, 12.4% were in the 41–45 age range, and 3.7% were in the 46–50 age range. As for their education, 1.8% held a middle school diploma or less, 12.4% had a high school or technical school diploma, 33.6% had an associate degree, 42.4% had a bachelor’s degree, and 9.7% had obtained a master’s degree or higher.

Measures
As all of our measures were initially developed in English, we employed the procedures suggested by Brislin (1980) to create the Chinese version. First, we invited two proficient bilingual experts to translate the scales into Chinese. Then, we had the Chinese-language versions translated independently back into English and compared with the original English instrument. After several rounds, we were satisfied with the translated Chinese versions. We then asked two HR managers of the company to comment on and revise the items. All measures were reported on a seven-point Likert scale, ranging from 1 (“strongly disagree”) to 7 (“strongly agree”).

Empowering leadership
We used Ahearne et al. (2005) 12-item scale to measure empowering leadership. This scale has been validated in the Chinese context by Zhang and Bartol (2010). It has four dimensions: (1) enhancing the meaningfulness of work, (2) fostering participation in decision-making, (3) expressing confidence in high performance, and (4) providing autonomy from bureaucratic constraints. A sample item was “My manager helps me understand how my objectives and goals relate to those of the company.” The Cronbach’s alpha of this scale was .88. Following prior studies (Ahearne et al., 2005; Cheong, Spain, Yammarino, & Yun, 2016; Wong & Giessner, 2018; Zhang & Bartol, 2010), we aggregated the four subscale scores to create a single composite score of empowering leadership.

OBSE
Organization-based self-esteem was measured using Pierce et al.’s (1989) 10-item scale, which has been validated in the Chinese context in the past (e.g., Liu, Lee, Hui, Kwan, & Wu, 2013). A sample item was “I am an important part of this place.” The Cronbach’s alpha of this scale was .86.
Access to resources
A three-item scale for AR that had been developed by Spreitzer (1996) was used in this study. A sample item was “I can obtain the resources necessary to support new ideas.” The Cronbach’s alpha of this scale was .69.

Access to information
A three-item scale for AI that had been developed by Spreitzer (1996) was used in this study. A sample item was “I understand the strategies and goals of the organization.” The Cronbach’s alpha of this scale was .90.

Creativity
Creativity was measured by Zhou and George’s (2001) 13-item scale, which has also been validated in the Chinese context (Zhang & Bartol, 2010). A sample item was “The employee suggests new ways to achieve goals or objectives.” The Cronbach’s alpha of this scale was .82.

Control variables
As prior research has suggested that employee gender, educational level, and age (e.g., George & Zhou, 2007; Zhang & Bartol, 2010; Zhang & Zhou, 2014) may influence employee creativity, we controlled for the effects of these demographic variables. Employees reported their age and education levels by selecting the appropriate category for each variable. We measured employee age using six categories: 1 = 30 years or younger; 2 = 31–35 years; 3 = 36–40 years; 4 = 41–45 years; 5 = 46–50 years; and 6 = 51 years or older. We measured employee education level using five categories: 1 = middle school diploma or less; 2 = high school or technical school diploma; 3 = associate degree; 4 = bachelor’s degree; and 5 = master’s degree or higher. As we collected data in five subsidiaries of a national petroleum company, we also controlled for employee subsidiary membership to remove any dependencies in the data it may cause.

Results
Confirmatory factor analysis
Confirmatory factor analyses (CFAs) were performed to evaluate the discriminant validity of the key variables – namely, empowering leadership behaviours, OBSE, AR, AI, and creativity. In the CFA model, measurement items were loaded to their corresponding latent factors, which were mutually correlated. Data were analysed in AMOS 22.0 (Arbuckle, 2013). The major fit indices of the proposed five-factor were \( \chi^2(769) = 1251.343, \chi^2/df = 1.627, \text{CFI} = .862, \text{TLI} = .846, \text{IFI} = .866, \) and \( \text{RMSEA} = .054. \) Given the large number of degrees of freedom, which indicates extensive model complexity and could negatively affect fit indices (Bagozzi & Edwards, 1998; Hu & Bentler, 1999), we concluded that the model fit the data reasonably well. In addition, all factor loadings were significant, demonstrating convergent validity. Hence, the discriminant validity of the key variables was confirmed.
**Descriptive statistics**

Table 1 presents the means, standard deviations, and zero-order correlations of all key variables. As shown in this table, empowering leadership was positively related to OBSE ($\gamma = .30, p < .01$), AR ($\gamma = .19, p < .01$), AI ($\gamma = .14, p < .05$), and creativity ($\gamma = .32, p < .01$). OBSE ($\gamma = .37, p < .01$), AR ($\gamma = .33, p < .01$), and AI ($\gamma = .21, p < .01$) were positively associated with creativity.

**Hypothesis testing**

We proposed that OBSE (H1), AR (H2), and AI (H3) would mediate the relationship between empowering leadership and creativity. We examined the proposed mediation following the procedure suggested by Baron and Kenny (1986). First, as shown in Models 2, 4, and 6 in Table 2, empowering leadership was positively related to OBSE ($\beta = .37, p < .01$) and AR ($\beta = .31, p < .01$), but the effect of empowering leadership on AI was not significant ($\beta = .23, \text{n.s.}$). Second, as shown in Model 8 in Table 2, empowering leadership was positively related to creativity ($\beta = .25, p < .01$). Third, we introduced the three mediators (i.e., OBSE, AR, AI) simultaneously into the regression. As shown in Model 9 in Table 2, the effect of empowering leadership on creativity was reduced, but still significant ($\beta = .16, p < .01$); the effects of AR ($\beta = .10, p < .01$) and OBSE ($\beta = .16, p < .01$) on creativity were positive and significant; and the effect of AI on creativity was not significant ($\beta = .01, \text{n.s.}$).

We also used the PROCESS model (Preacher & Hayes, 2008) to test the significance of the indirect effects of empowering leadership on creativity through OBSE and AR, respectively. The results showed that the indirect relationship was significant for OBSE (indirect effect $= .06, 95\% \text{ CI} = 0.03, 0.12$) and AR (indirect effect $= .03, 95\% \text{ CI} = 0.01, 0.08$). Taken together, these results indicate that AR and OBSE partially mediated the

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<td>.14*</td>
<td>-.04</td>
<td>.14*</td>
<td>.11</td>
<td>.56**</td>
<td>(.90)</td>
<td></td>
</tr>
<tr>
<td>8. Subordinate creativity</td>
<td>4.97</td>
<td>0.53</td>
<td>.00</td>
<td>.01</td>
<td>.02</td>
<td>.32**</td>
<td>.37**</td>
<td>.33**</td>
<td>.21**</td>
<td>(.82)</td>
</tr>
</tbody>
</table>

Notes. $n = 217$. Bracketed values on the diagonal are the Cronbach’s alpha value of each scale. For gender, 1 = male, 2 = female; for age, 1 = age 30 or younger, 2 = age 31–35, 3 = age 36–40, 4 = age 41–45, 5 = age 46–50, 6 = age 51 or older; for education, 1 = middle school or less, 2 = high school/technical school diploma, 3 = associate degree, 4 = bachelor’s degree, 5 = master’s degree or greater. OBSE = organization-based self-esteem.

*p < .05; **p < .01.
relationship between empowering leadership and creativity, whereas AI did not. Thus, H1 and H2 were supported, but H3 was not supported.

We predicted that the relationship between OBSE and creativity would be moderated by AR (H4) and AI (H5). As shown in Model 10 in Table 2, the coefficient of the interaction term “OBSE × Access to resources” was positive and significant ($\beta = .11, p < .01$). The coefficient of the interaction term “OBSE × Access to information” was not significant.

<table>
<thead>
<tr>
<th>Table 2. Results of hypothesis testing</th>
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<tbody>
<tr>
<td>OBSE</td>
</tr>
<tr>
<td>M1</td>
</tr>
<tr>
<td>Company_1</td>
</tr>
<tr>
<td>Company_2</td>
</tr>
<tr>
<td>Company_4</td>
</tr>
<tr>
<td>Company_5</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Age 30 or younger</td>
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<tr>
<td>Age 31–35</td>
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<tr>
<td>Age 41–45</td>
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<tr>
<td>Age 46–50</td>
</tr>
<tr>
<td>Education: middle school or lower</td>
</tr>
<tr>
<td>Education: high school</td>
</tr>
<tr>
<td>Education: bachelor’s degree</td>
</tr>
<tr>
<td>Education: master’s or higher</td>
</tr>
<tr>
<td>Empowering leadership behaviour</td>
</tr>
<tr>
<td>OBSE</td>
</tr>
<tr>
<td>Access to resources</td>
</tr>
<tr>
<td>Access to information</td>
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<tr>
<td>OBSE × Access to resources</td>
</tr>
<tr>
<td>OBSE × Access to information</td>
</tr>
<tr>
<td>R²</td>
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<tr>
<td>F</td>
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<tr>
<td>ΔR²</td>
</tr>
<tr>
<td>ΔF</td>
</tr>
</tbody>
</table>

Notes. n = 217. Gender was coded as one dummy variable with female as the reference group; age was coded as five dummy variables with the category of “36–40” as the reference group; education was coded as four dummy variables with the category of “associate degree” as the reference group; Employee subsidiary membership was coded as four dummy variables with company_3 as the reference group. OBSE = organization-based self-esteem.

*p < .05; **p < .01.
We also tested the two moderation hypotheses using the PROCESS model (Preacher & Hayes, 2008). The results showed that the moderating effect was significant for AR (moderating effect = .11, 95% CI = 0.03, 0.19), but insignificant for AI (moderating effect = –.01, 95% CI = −0.09, 0.07). Therefore, H4 was supported, but H5 was not supported.

To illustrate the interaction effect of OBSE and AR, we followed the widely accepted procedure described by Aiken and West (1991) to plot the relationship between OBSE and employee creativity at high and low (one standard deviation above and below the mean, respectively) levels of AR (Cohen, Cohen, West, & Aiken, 2003). As shown in Figure 2, when AR was high, the relationship between OBSE and employee creativity was positive and significant (β = .37, p < .01); when AR was low, the relationship between OBSE and employee creativity was not significant (β = .08, n.s.).

Lastly, we used the PROCESS model to estimate the conditional indirect effects of empowering leadership on creativity via OBSE at different levels of AR. The results showed that the conditional indirect effect of empowering leadership on creativity was positive and significant when AR was high (Indirect effect = .10, 95% CI = 0.05, 0.17); however, it was not significant when AR was low (Indirect effect = .01, 95% CI = −0.02, 0.05), suggesting that the indirect effect of empowering leadership on creativity was moderated by AR.

Supplementary analyses

Researchers have argued that there may be a “Too-much-of-a-good-thing” effect of empowering leadership on follower outcomes, meaning that excessive empowering leadership may lead to either no additional benefit or even undesirable outcomes (Pierce & Aguinis, 2013). Recently, Lee, Cheong, Kim, and Yun’s (2017) tested this proposition and found that there was indeed a curvilinear (i.e., inverted U-shaped) relationship between empowering leadership and employee task performance. Accordingly, we conducted a supplementary analysis to test whether there was also a curvilinear relationship between empowering leadership and employee creativity in our study. Our results showed that after controlling for employee gender, age, education, and subsidiary membership, the quadratic term (X²) of empowering leadership was negatively related to creativity (β = −.06, p < .01). The sign of the quadratic term was negative, suggesting an
inverted U-shaped relationship between empowering leadership and creativity. Figure 3 shows that the positive effect of empowering leadership on creativity diminishes as the leader engage in high-level empowering behaviour.

Discussion

Theoretical contributions
The results of this study reveal that AR and OBSE partially mediated the relationship between empowering leadership and creativity, and that AR moderated the relationship between OBSE and creativity such that the relationship was significant only when AR was high. Our study is among the first to empirically test the proposition that leaders may enhance employee creativity by impacting both personal and context-specific factors simultaneously (Mumford et al., 2002; Shalley & Gilson, 2004). Our findings offer several important new insights that enhance the literatures of empowering leadership and creativity.

First, we contribute to the empowering leadership literature by examining the mechanisms between empowering leadership and creativity from the self-evaluative perspective. OBSE is a situation-specific kind of self-esteem that results from a well-defined context or relational role. Given the importance of self-esteem to human beings in general, it is of theoretical significance to illuminate that the effect of empowering leadership was mediated by employees’ OBSE (Shamir et al., 1993).

Second, our results add a new perspective to the leadership and creativity literatures by revealing the mediating role of AR. Prior studies examining the mechanism between empowering leadership and creativity have exclusively focused on individual motivation or activities (Sharma & Kirkman, 2015). However, creative work is resource intensive. Researchers have proposed that leaders must provide their employees with adequate resources and support (e.g., time, funds, materials) so as to facilitate creativity (Mumford et al., 2002; Ramus, 2001). Our study is among the first to empirically test this proposition.

Furthermore, we advance the interactionist perspective of creativity by showing the moderating effect of AR in the relationship between OBSE and creativity. In doing so, we attempt to answer calls to explore how actor-related and context-specific factors interact to influence creativity (Amabile, 1996; Zhou & Hoever, 2014). Our findings suggest that

Figure 3. Curvilinear relationship between empowering leadership and employee creativity.
OBSE can be transformed into creativity only when employees are provided with sufficient resources to support their creative efforts. As the development of new ideas is a time-intensive and resource-demanding undertaking, adequate resources are essential for realizing the creative potential of high-OBSE employees (Mumford & Hunter, 2005; Shalley, Gilson, & Blum, 2009). Conversely, when faced with external resource constraints, employees are unlikely to generate novel and useful ideas even if they possess high levels of OBSE.

Lastly, our supplementary analysis showed a curvilinear relationship (i.e., inverted U-shaped) between empowering leadership and employee creativity. Our result is consistent with Lee et al.’s (2017) study, which found an inverted U-shaped relationship between empowering leadership and task performance. Our finding is a constructive replication of Lee et al.’s study and suggests that the “Too-much-of-a-good-thing” effect of empowering leadership also applies to employee creativity. Although a moderate level of empowering leadership may facilitate creativity, excessive empowerment from the leader may not bring additional benefits. This is because too much empowerment may generate risks such as a lack of managerial control, no enough guidance from the leader, or increased work burden and ambiguity for employees (Martin et al., 2013). Such risks may offset the potential positive effect of empowering leadership on creativity. To facilitate the optimal functioning of employee creativity, leaders should be aware of the potential risks of high-level empowering leadership and keep a balanced view when engaging in empowering behaviour (Lee et al., 2017).

Contrary to our prediction, AI did not mediate the relationship between empowering leadership and creativity, nor did it moderate the relationship between OBSE and creativity. One possible explanation for these findings may be related to the construal level of the items for AI versus the items for AR. Construal level refers to the level of abstraction by which we mentally represent objects, events, or situations (Burgoon, Henderson, & Markman, 2013). High construal levels tend to focus on the future and hypothetical events, and on the abstract features of objects and situations; in contrast, low construal levels involve a strong focus on the “here and now,” and on concrete details of objects and situations (Trope & Liberman, 2010). Thus, our items for AI may represent a high construal level, because they focus on the future goals (i.e., vision) and abstract information (i.e., strategy) of the organization. In contrast, our items for AR may represent a low construal level, because they focus on the concrete resources that employees can access right now. According to the “construal level fit” proposition (Berson, Halevy, Shamir, & Erez, 2015), people have a preference for information that fits their construal levels. The effects of AI were not significant in our study, perhaps because most employees in our sample had relatively low construal levels. Unfortunately, we were unable to test this possibility as we did not measure employee construal level in our study. We encourage future studies to explore how construal level may influence the creativity process of employees.

**Practical implications**

Our research has several practical implications for managers. First, we found that empowering leadership behaviours were significantly related to employee creativity. Accordingly, it behoves leaders to make deliberate efforts to highlight the meaningfulness of the work, foster employee participation in decision-making, convey confidence in employees’ capabilities, and remove bureaucratic constraints. Such behaviour may help employees develop a more positive self-evaluation and, in turn, support their creativity.
Second, simply enhancing employees’ OBSE may not be enough to facilitate employee creativity. Leaders must ensure that the employees are provided with the necessary resources and support. Otherwise, employees with high OBSE may not be able to fulfil their creative potential. Moreover, the leaders need to take into account both employees’ self-evaluation and the external supports available to those employees simultaneously, so that these two factors will work together in a synergistic way to enhance employee creativity (Axtell et al., 2000).

**Limitations and directions for further research**

Our findings should be interpreted in light of several limitations. The first limitation is related to the method used to collect the data. Although we adopted a multisource and multi-wave design, our results may be subject to a “mutual admiration society” bias, wherein employees who see their boss as empowering are, in return, likely to be seen by their boss as more creative. Thus, future research might use objective creativity data to replicate our findings. In addition, our research design did not allow us to assess causality in our model. Further studies might employ a prospective design, in which the mediators and dependent variables are measured at multiple times. Such a design would allow for assessing the causality between the variables in our model.

Second, due to the space limits of our survey, we were not able to measure and control for some confounding variables (e.g., employees’ empowering role identity, uncertainty avoidance, or trust in supervisor) that might influence the effects of empowering leadership on followers. Future studies might further explore whether our results will hold when controlling for those variables. In related areas, previous research has reported that the relationship between supervisor behaviour and employees’ reactions or creative behaviour may be moderated by personal factors such as employee creative role identity (Wang & Cheng, 2010), creative personality (Madjar, Oldham, & Pratt, 2002), and power distance orientation (Hui, Au, & Fock, 2004). In the future, researchers should continue to examine other factors that may moderate the relationship between empowering leadership and employee OBSE.

Lastly, the items we used to measure AR were purposely written in a general format, in order to cover all possible resources necessary for employee creativity (Spreitzer, 1996). In the literature, other researchers have also used general items to measure AR (Madjar et al., 2011; Zhou et al., 2008). However, this approach has a limitation in the sense that we are unable to specify which types of resources are important for employee creativity. It should be noted that previous studies focusing on specific types of resources have generated mixed results. For example, in a qualitative study, Unsworth and Clegg (2010) reported that adequate time (a resource) is an important precondition for employees to undertake creative actions. In a quantitative study, however, West and Anderson (1996) found that organizational resources (operationalized as team budgets) were in general unrelated to team innovation. Such mixed findings suggest that it may worthwhile for future studies to adopt a more nuanced measure of resources, so that we can determine which types of resources are necessary to facilitate employee creativity.

**Conclusion**

Integrating empowerment theories and important creativity theories, our research shows that employees’ OBSE and AR both mediate the relationship between empowering leadership and creativity. Our study also extends our understanding of the interactionist
perspective of creativity by revealing the moderating effect of AR on the relationship between OBSE and creativity. This study provides a novel perspective for pondering how and when empowering leadership may facilitate employee creativity.

Acknowledgements

This study was supported by the China National Science Fund for Distinguished Young Scholars (71425003), the Humanities and Social Sciences Program of the Ministry of Education of China (14YJC630128), and the National Natural Science Foundation of China (71472179).

References


*Received 18 October 2015; revised version received 12 March 2018*