Linking authoritarian leadership to employee creativity

The influences of leader–member exchange, team identification and power distance

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Abstract

Purpose – The present study aims to examine how and when authoritarian leadership affects employee creativity. Based on social exchange theory and team identification literature, the present research attempts to simultaneously explore how leader–member exchange (LMX) and team identification serve as two important mediating processes in the relationship between authoritarian leadership and employee creativity. Furthermore, this research uncovers the mechanism under which conditions the effects of authoritarian leadership will be magnified or minimized.

Design/methodology/approach – A survey has been conducted in China by using a questionnaire to collect data. The study sample consisted of 325 employees. LISREL 8.7 and SPSS 18.0 were used to test the mediating and moderating effects, respectively.

Findings – Results from 325 employees revealed that both LMX and team identification mediated the negative relationships between authoritarian leadership and employee creativity. Specifically, the relationship between two mediators was that LMX was positively related to team identification. In addition, the relationship between authoritarian leaderships and LMX and team identification was moderated by power distance, such that the negative relationships will be weaker with high power distance and stronger with low power distance.

Practical implications – First, firms and managers should recognize and take actions to reduce the negative effects of authoritarian leadership, such as effective selection system and interventional mechanisms because authoritarian leadership is important in influencing employee creativity. Second, managers are suggested to take specific actions, such as increasing communications and team-building activities, to promote LMX and team identification, thereby enhancing employee creativity. Third, managers should engage in behaviors that motivate employee creativity, such as empowerment behaviors, other than authoritarian leadership, when the employee has low power distance.

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Originality/value – The primary contribution of this research is that two psychological processes (i.e. LMX and team identification) have been identified through which authoritarian leadership is related to employee creativity. Meanwhile, this study explores the relationship between LMX and team identification. Moreover, the current research deepens our understanding of power distance by empirically examining the moderating effect of power distance. Overall, the findings extend our understanding about the relationship between authoritarian leadership and employee creativity and contribute to literature on authoritarian leadership and creativity.

Keywords Power distance, Leader–member exchange, Employee creativity, Team identification, Authoritarian leadership

Paper type Research paper

Introduction

Managers' leadership has been widely considered as the key factor affecting employee creativity (Herrmann and Felfe, 2013; Le *et al.*, 2017; Shalley and Gilson, 2004; Shalley *et al.*, 2004; Qu *et al.*, 2015). The various leadership styles, such as empowering leadership and transformational leadership, have been applied to exercise managers' formal authority and position power, which have largely played the positive role in affecting employee creativity (Gong *et al.*, 2009; Zhang and Bartol, 2010). Recently, however, much attention has focused on "the dark, or destructive, side of leadership" (Lee *et al.*, 2013). The increase in frequency of such destructive leader behaviors and their significant impact on organizational and individual outcomes in the workplace are important reasons for this research interest. One such a construct that embodies leaders' ineffective behavior is that of authoritarian leadership, which refers to a leadership approach that emphasizes leaders' absolute authority and requires subordinates to be absolutely obedient (Cheng *et al.*, 2000). Particularly in the Chinese culture, authoritarian leadership has been viewed as an important contextual factor that affect employees' willingness and motivation to engage in creative activities because authoritarian leadership emphasize on obedience to authority and discourage the creative thinking of employee (Zhang *et al.*, 2011). Given its dominance role in Chinese modern organizations (Zhang *et al.*, 2015) and its significant role in influencing employee behaviors, few studies have begun to examine the effects of authoritarian leadership on creativity. For example, Zhang *et al.* (2011) reported a negative relationship between authoritarian leadership and group creativity at the group level.

However, the extant literature is marked by some concerning limitations. First, although some scholars have started to explore the mediators between authoritarian leadership and employee outcomes (Chen *et al.*, 2014), the underlying psychological mechanisms linking authoritarian leadership and employee creativity still are not fully understood. Given the fact that authoritarian leadership can influence employees' psychological connections to their leaders and teams (Chan *et al.*, 2013; Chen *et al.*, 2014; Schaubroeck *et al.*, 2017), and such psychological connections will ultimately contribute to employee creativity (Shalley and Perry-Smith, 2001), the potential psychological mediators linking authoritarian leadership and employee creativity should be clarified. One goal of this study is to address this limitation by identifying the psychological processes underlying the relationship between authoritarian leadership and employee creativity. Second, the effect of authoritarian leadership is contingent on individual differences, such as cultural values, but limited relevant research work has been done. Previous studies have argued that the cultural values employees hold play an important role in how employees react to authoritarian leadership (Pellegrini and Scandura, 2008; Schaubroeck *et al.*, 2017). Therefore, another goal of this study is to empirically investigate the potential moderating role of cultural values to

provide a better understanding of the relationship between authoritarian leadership and employee creativity.

In this article, we draw from social exchange perspective that highlight the role of employees' perceptions of their social exchange relationships with their leaders to argue that LMX mediates the relationship between authoritarian leadership and employee creativity. Indeed, scholars have proposed that social exchange is an important psychological process by which leaders influence their employees (Van Knippenberg *et al.*, 2007; Van Knippenberg *et al.*, 2004). Specifically, leader–member exchange (LMX), which is defined as the quality of the relationship that a leader has with a subordinate (Graen and Scandura, 1987), has been presented as a core social exchange mechanism. According to the social exchange theory, treatment by authoritarian leaders influences employees' perceptions of quality of social exchange (Cropanzano and Mitchell, 2005), and it will further influence employees' behaviors, such as creativity. Thus, the objective of this study is to respond to and extend this early research by examining the role of LMX as a social exchange process in the authoritarian leadership–creativity relationship.

In addition to LMX, the current study also considers team identification as the other psychological mechanism that explains how authoritarian leadership is related to employee creativity from the perspective of social exchange. Given that team is the basic work unit in contemporary workplace (Loi *et al.*, 2014), the social exchange relationship between employee and team itself is another important psychological mechanism linking authoritarian leadership and employee creativity. In particular, team identification, which refers to the level of psychological attachment and the sense of belonging felt by team members toward their team (Bezrukova *et al.*, 2009), represents such a social exchange relationship between employee and the team. In line with previous studies (Zhang *et al.*, 2011), the authoritarian behavior of leaders, such as controlling behaviors, affects psychological connection between employees and the team, thereby influencing employee creativity. Given the fact that leader and team are two primary targets for employees to deal with (Loi *et al.*, 2014), we can potentially obtain a significantly integrated and accurate picture when considering psychological connects to the leader (i.e. LMX) and the team (i.e. team identification) simultaneously. However, few studies have empirically investigate how both LMX and team identification mediate the links between authoritarian leadership and employee creativity. Therefore, the present study aims to contribute to this important yet relatively unclear issue.

In addition, contingency factors that may strengthen or weaken the effects of authoritarian leadership should be clarified. Specifically, as one of the most cultural values, power distance at the individual level, is defined as the extent to which employees accept the unequal distribution of power in organizations/teams (Farh *et al.*, 2007). In line with prior work (Farh *et al.*, 2007), we propose power distance as an important moderator for two reasons. First, power distance is one of the most relevant cultural value factors in the current research framework because authoritarian leadership manifests itself in the misuse of power, and employees' perception of power distribution (i.e. power distance) tends to affect their understanding of and reaction to leaders' authoritarian behaviors. Second, power distance is one of the most important cultural values that influence social exchange process. For example, Kirkman *et al.* (2009) tested the moderating role of power distance in the relationship between transformational leadership, procedural justice and organizational citizen behavior from the perspective of social exchange.

Literature review and research hypotheses

This section traces the development of the research model by firstly exploring the general nature of authoritarian leadership as it relates to creativity. The current study next

examines how authoritarian leadership is related to psychological processes as delineated by the literature (Van Knippenberg *et al.*, 2007; Van Knippenberg *et al.*, 2004). We investigate the relationship between authoritarian leadership and LMX and team identification. Then, we examine the links among LMX, team identification and employee creativity. Finally, we investigate the moderating role of power distance.

Social exchange theory

Social exchange theory, which explains social change as a process of interactive exchanges between different people, is strongly rooted in social psychology (Blau, 1964; Cropanzano and Mitchell, 2005). The social exchange theory is based on the "normative rules" of reciprocity within social relationships (Blau, 1964). This theory proposes that individuals are motivated to demonstrate positive attitudes and behaviors toward individuals who value them and their contributions. In this perspective, a reciprocal and high-quality exchange relationship will be built when one person does another a favor (Blau, 1964). The social exchange theory has been used extensively as a theoretical framework linking leadership behaviors to employee outcomes (Chen *et al.*, 2014; Wang *et al.*, 2005). LMX, exchanges between the employee and his or her leader (supervisor), has been considered as a core mechanism of social exchange that explains how leaders influence followers' outcomes, including creativity (Wang *et al.*, 2005).

The social exchange theory provides the overarching framework for our model consistent with its theoretical foundations. Specifically, we propose that as a destructive side of leadership, authoritarian leadership is likely to damage the exchange relationship between leaders and employees (i.e. LMX), and low LMX will finally lead to reduce the wish of creative activities from employees.

Moreover, in this study, we consider team identification as another important social exchange mechanism linking authoritarian leadership and employee creativity because team identification determines whether employees follow team norms and exert themselves on behalf of the team (Somech *et al.*, 2009), and team identification can also represent the social exchange relationship between employee and the team. Few studies (Loi *et al.*, 2014; Tangirala *et al.*, 2007) have argued that LMX provides important informational cues to employees on their identification with teams (i.e. team identification) because leaders are usually viewed as organization representatives. Employees with high LMX are likely to view themselves as belonging to the organization (Tangirala *et al.*, 2007) and tend to build good social exchange relationship with the team. Thus, it is logical to expect that team identification, a particular form of identification, will play an important role during social exchange processes.

Meanwhile, certain scholars propose that such social exchange processes will be strengthened or weakened by some particular individual-level cultural values (e.g. power distance) (Farh *et al.*, 2007). Therefore, we expect that power distance will moderate the aforementioned relationships.

Therefore, the proposed model of this study is illustrated in Figure 1.

Authoritarian leadership and employee creativity

Authoritarian leadership originated from the research on enterprises in Taiwan during the 1970s, and it has been proposed as an important part of the patriarch-style leadership (Cheng *et al.*, 2000). As an independent leadership style, authoritarian leadership has attracted broad academic attentions, and it has been studied by scholars across the world (Kiazad *et al.*, 2010). Authoritarian leadership, which emphasizes absolute control of employees, is a common leadership mode among Chinese, and it relies on the personal

dignity of leaders, which directly shows the superior–inferior relation between leaders and subordinates (Zhang *et al.*, 2015). This leadership style is mainly exhibited in the following aspects:

- autocratic style and no disclosure of any information to subordinates;
- lessening the ability of subordinates and deliberate ignorance of the suggestions and contributions of subordinates;
- image cosmetics to preserve their own dignity and to control relevant information; and
- instructional behavior because leaders have a strict requirement for the performance of subordinates, and they will reprimand the subordinates whose performance is poor (Pellegrini and Scandura, 2008).

Research has shown that authoritarian leadership will have variation with a series of employee results, and it is in negative correlation with voice behavior (Zhang *et al.*, 2015), organizational citizenship behavior (Wu *et al.*, 2012) and affective trust (Chen *et al.*, 2014). In the existing creativity literature, scholars have widely explored the influences of transformational leadership (Gong *et al.*, 2009), empowering leadership (Zhang and Bartol, 2010) and shared leadership (Peter *et al.*, 2015) on employee creativity. However, the relationship between authoritarian leadership and employee creativity at the individual level has not been empirically verified.

In this study, we expect that authoritarian leadership will relate negatively to employee creativity. First, employee is likely to comply and conform to the leader's authority and decisions when his/her leaders show authoritarian behaviors, such as controlling behaviors. Therefore, a dominance–subordination relationship between leader and employee is developed and strengthened (Zhang *et al.*, 2011). In line with previous studies (Mumford *et al.*, 2002), such conformity pressure is likely to be detrimental to employee creativity. When the leader demands absolute obedience from subordinates, we can expect that employees would not have any initiative, proactivity and motivation to come up with new approaches to perform their tasks. Such authoritarian behaviors will lead to less communication and weak information sharing between leader and employee (Shalley and Gilson, 2004). Authoritarian leaders are also likely to produce a climate of fear and caution (Pellegrini and Scandura, 2008).Therefore, authoritarian leadership decreases the expression of personal ideas or participation in problem solving, thereby inhibiting employee creativity.

Mediating role of LMX between authoritarian leadership and employee creativity. LMX is a social exchange process that reflects the quality of relation between leaders and employees (Graen and Scandura, 1987). The exchange quality depends on mutual trust, respect and appreciation. The literature has proposed that the quality of such exchange with employees could be determined by leadership behavior (Mahsud *et al.*, 2010). The leadership

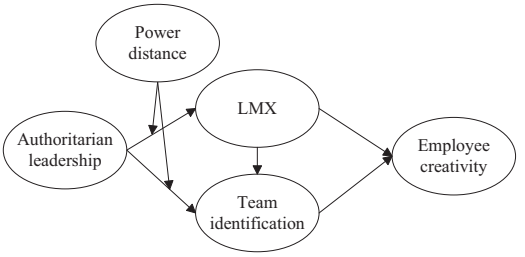

Figure 1.
Research model

literature further regard various leadership behaviors as the antecedent of LMX (Newman *et al.*, 2015). Accordingly, we propose that authoritarian leadership could be related to LMX negatively. Specifically, an authoritarian leader tends to require employees to work based on her/his instructions and punishes disobedient employees (Cheng *et al.*, 2004). This control behavior gives employees no choice, and make them completely submissive to leaders' orders and requirements. Under this condition, such authoritarian behaviors would release a signal to employees that leaders and employees are in a superior–inferior relationship, which will cause negative emotions in employees against leaders, such as terror and fear, thereby reducing the wish of employees to reward based on the "leader–employee" binary relation; the emotional exchange between employees and leaders is also reduced.

On the other hand, LMX has been widely regarded as an important antecedent for employee creativity (Gu *et al.*, 2015). High-quality leader–member relations mean that employees can obtain team resources and psychological support from leaders (Graen and Uhl-Bien, 1995). According to the social exchange theory, subordinates desire reward, and they will work hard, undertake creative activities and exhibit high creativity if they obtain the above-mentioned support, trust and other resources from leaders (Xu *et al.*, 2012). The resource and support they receive are necessary in undertaking creative activities. By contrast, employees with low LMX are limited to exchanges with leaders based on employment contracts because they are willing to work by rules to avoid the risks of innovation, and they will exhibit low creativity (Volmer *et al.*, 2012; Tierney *et al.*, 1999).

As the leadership literature contends, leadership behavior has a key influence on the creation of the "leader–employee" binary relationship (Newman *et al.*, 2015). The high control and requirement of employees by authoritarian leaders will cause low LMX, and low LMX will lead to reduced wish of reward from employees. Employees are unwilling to actively express new ideas because of fear of losses caused by failure that will further reduce creativity. Therefore, the current study proposes that:

H1. LMX mediates the negative relationship between authoritarian leadership and employee creativity.

Mediating role of team identification between authoritarian leadership and employee creativity

Team identification reflects the degree to which an employee of a given team attaches to her/his membership in that group (Huettermann *et al.*, 2013). It is suggested that such identification "determines whether people will be inclined to follow team norms and exert themselves on behalf of the team" (Somech *et al.*, 2009, p. 364). In this perspective, we expect team identification serving as another important social exchange mechanism between employee and the team, and therefore, we posit that team identification plays a mediating role in the relationship between authoritarian leadership and employee creativity. Specifically, when an authoritarian leader exhibits instructional behavior and often reprimands employees who fail to complete their tasks, employees may feel that their efforts and contributions to the team are not respected or accepted (Huettermann *et al.*, 2013). The high requirement and control by leaders will make employees doubt their ability at work and easily elicit feelings of isolation in the team. As a result, employees hardly define themselves as team members. The strict control of leaders is detrimental to teamwork and further reduces team identification. For example, some scholars have indicated that identification is different when a significant competition exists in an organization (Mael and Ashforth, 1992).

On the other hand, studies have stated that team identification is very important for employee creative behavior (Dollinger *et al.*, 2005; Farmer *et al.*, 2003). It is suggested that the more employees identify with the team, the more they will endeavor to achieve team goals (Dick *et al.*, 2007; Hirst et al, 2009). Accordingly, the sense of team identification of employees will encourage employees to do considerable things that will benefit the team from the point of team interests, including cooperation and sharing (Ruggieri and Abbate, 2013; Tang *et al.*, 2014). Knowledge sharing and information exchange increase the creative behavior of employees. The team identification of employees will upgrade their psychological safety and eliminate the risks caused by uncertainty. Hence, employee creativity will be stimulated.

In summary, the literature has indicated that leadership behavior has a decisive influence in facilitating the team identification of employees. From this perspective, authoritarian leaders with high control and requirement for employees can hardly make employees define themselves as a part of the team. Decreased team identification in turn prevents employees from initiatively proposing new ideas and methods that benefit the team. They will not overcome the difficulties encountered in the innovation process, which is not good for employee creativity. Therefore, the current study proposes that:

H2. Team identification mediates the negative relationship between authoritarian leadership and employee creativity.

Relationship between LMX and team identification

The above argument indicate that the relationship between authoritarian leadership and employee creativity should be realized by both LMX and team identification. Recently, some scholars have realized that LMX and team identification may not be independent of each other; they have a potential relationship (Van Knippenberg, 2007). From this perspective, we further explore the potential relationship between LMX and team identification in the linkage between authoritarian leadership and employee creativity. In line with previous research (Loi *et al.*, 2014; Tangirala *et al.*, 2007), we expect that LMX will facilitate organizational identification.

First, high-quality LMX can make employees in one team understand their team clearly (Tse *et al.*, 2012). As an agent of the team, a leader could use formal or informal ways to share her/his vision and expectation of the team and employees in the team through high-quality LMX. In addition, employees with high-quality LMX would view their roles and work to be more defined and stable in teams because they are treated as valued team members and a part of its in-group rather than out-group members (Loi *et al.*, 2014). This phenomenon would improve the understanding of employees about the team, which would promote their belonging to the teams and the emotions that they experience as a result of team membership. Therefore, employees are regarded as reliable people, thereby upgrading the team identification.

Second, as the LMX literature contends, LMX normally "serves as channels for leaders to distribute organizational resources, job-related benefits, and psychological support to subordinates" (Tse *et al.*, 2012, p. 356). Under this condition, employees in high-quality LMX may experience feelings of superiority and respect, which would increase their team identification. LMX could not only bring about resources and support for employees but also significant responsibility, and the awareness of which would enhance their identification (Tse *et al.*, 2012). Finally, high-quality LMX will help employees have excellent career development to realize their needs of self-development and to increase their team identification.

In summary, authoritarian leadership emphasizes the absolute authority of leaders and their absolute control over and obedience from subordinates. This deliberate isolation from employees is not good for establishing high-quality LMX between employees and leaders, thereby affecting the relation between employees and the team (team identification). In fact, some scholars have stated that LMX may be the antecedent variable of team identification (Loi *et al.*, 2014; Sluss *et al.*, 2008). For instance, scholars indicated that LMX and perceived organizational support are the antecedent variables of team identification (Sluss *et al.*, 2008). Therefore, the current study proposes the following hypothesis:

H3. LMX and team identification play a sequential mediating role between authoritarian leadership and employee creativity, in which authoritarian leadership first influences LMX, then team identification and finally employee creativity.

Moderating role of power distance

A review of empirical studies suggested that more research examined power distance at the individual level than at the societal level (Chen *et al.*, 2014). We define and operationalize power distance at the individual level given that we focus on the moderating the role of power distance on the relationship between authoritarian leadership and LMX/team identification. Power distance at the individual level refers to "the extent to which an individual accepts the unequal distribution of power in institutions and organizations" (Farh *et al.*, 2007). Employees with high levels of power distance are likely to yield to authority figures and to allow authorities to make decisions without their participation. In comparison to charismatic or cooperative leadership, authoritarian leadership maybe be less effective in low power distance conditions (Leong and Fischer, 2011). In line with Lin *et al.*'s (2013) and Wang *et al.*'s (2012) prior work, we expect that power distance would moderate the relationships between authoritarian leadership and the two mediators, namely, LMX and team identification.

First, employees with low power distance believe that they are equal to their leaders in status (Farh *et al.*, 2007). Conflicts arise when these leaders show controlling behavior (Lin *et al.*, 2013). Such conflicts negatively affect the relationship between employees and their leaders. Therefore, authoritarian leadership is negatively related to LMX and employees with low power distance levels. In addition, employees with a low level of power distance results in decreased team identification because a leader is an important team representative. By contrast, employees with a high level of power distance would show deference and obedience to their leaders (Farh *et al.*, 2007). These employees also tend to consider themselves inferior to leaders of high rank and accept the imbalance of power, such that they will take authoritarian leadership for granted and ignore how they are treated by their leaders even in displays of controlling behavior. Consequently, this would weaken the negative impact of authoritarian leadership on LMX and team identification.

Second, employees with a high level of power distance tend to rely on leaders because of the nature of power distance, such as strong deference to authority figures, and they have low expectations that they will be consulted about decisions concerning the team or themselves (Schaubroeck *et al.*, 2017), especially in China where employees are extremely dependent on their leaders for their resources (Wang *et al.*, 2012). Under authoritarian leadership, employees with high levels of power distance are more likely to tolerate the controlling behavior, which reduces the negative impact of authoritarian leadership on LMX and team identification. By contrast, employees with low power distance are sensitive to the unequal treatment by leaders (Sue-Chan and Ong, 2002), and thus, they react negatively to authoritarian leadership. As such, the negative relationship between authoritarian

leadership and LMX or team identification would be strengthened. Thus, the current study proposes the following hypothesis:

H4a. The relationship between authoritarian leadership and LMX is moderated by power distance, such that the relationship is weaker with high power distance and stronger with low power distance.

H4b. The relationship between authoritarian leadership and team identification is moderated by power distance, such that the relationship is weaker with high power distance and stronger with low power distance.

Method

Samples and procedures

The present study adopts the method of questionnaire survey to collect data. The survey was conducted in 24 firms located in the mid-east of the People's Republic of China. These firms are from various industries, such as financial services, traditional manufacturing, agricultural product processing, high-tech and so on. We contacted the top managers of these firms with personal network. Top management in all firms agreed to participate our study when we agree to share the results to them. This approach is particularly useful in China, where *guanxi* (or personal contacts) significantly facilitate company access (Easterby-Smith and Malina, 1999).

With the support from top management in each firm, employees were invited to participate in the survey with a guarantee of privacy and confidentiality. A total of 355 (69.88 per cent answer rate) out of 508 questionnaires distributed to employees were returned, out of which 325 (63.97 per cent effective return rate) were useful responses. For the sample selection, ANOVA was used to test whether different types of industries and firms exhibited significant differences. The results showed that among the different types of industries and firms, none of the variables exhibited significant differences; thus, the data were acceptable for use in our study. Table I shows the detailed demographic information of the sample. Unified missing value was used to indicate the rare circumstances of unfilled items of demography, except gender.

Measures

To ensure the validity and reliability of measurement, the current study adopted the scales from the existing literature and modified them to fit our context. Given that the initial measurements are in English, we followed the procedures recommended by Brislin (1970, 1990) for survey translations to translate the English measurement into Chinese version. Further, a pre-survey was conducted to evaluate the questionnaire in terms of design and wording, followed by revisions of the questionnaire made on the basis of the suggestions provided by the respondents of the pre-survey. Scales were scored using a five-point Likert-type scales ranging from 1 = strongly disagree to 5 = strongly agree.

Authoritarian leadership is measured by the scale developed by Cheng *et al.* (2000). This scale includes five items, such as "all things in the team are independently decided by the leader" and "it gives me much pressure to work with the leader." The reliability coefficient (Cronbach's α) of this scale was 0.865, which showed a high reliability.

We adopted the *LMX* scale from Graen and Uhl-Bien (1995). This scale includes seven items, such as "My leader understands my working difficulties and needs," "I understand my leader's satisfaction degree with my work," etc. The Cronbach's α value of this scale was 0.888, which showed good reliability.

Demographics	*N*	(%)
Gender		
Male	281	86.5
Female	44	13.5
Age		
Less than 30	193	59.4
31-40	112	34.5
More than 40	20	6.1
Job nature		
Production and processing industries	89	27.4
Technology for R&D	112	34.7
Others (marketing, sales, and administrative management)	124	38.1
Educational level		
Master degree or above	11	3.4
Bachelor degree	114	35.1
Junior college	117	36.0
High school	68	20.9
Junior high school education and below	15	4.6
Work tenure		
Less than 5 years	234	72.0
5-10 years	48	14.8
More than 10 years	43	13.2

Table I. Sample demographic (n = 325)

To measure *team identification*, we used the scale developed by Smidts *et al.* (2001). This scale includes five items, such as "I have a strong sense of belonging in my team," "I'm glad to be a member of my team," etc. It has Cronbach's α value of 0.884, implying high reliability.

Power distance was measured using the six-item scale of Farh *et al.* (2007). We excluded one item that had cross-loadings greater than 0.50. A sample item is as follows: "It is frequently necessary for a leader to use authority and power when dealing with subordinates." The Cronbach's α value of this scale was 0.794, which showed a high reliability.

Employee creativity was measured based on the scale developed by Farmer *et al.* (2003). This scale includes five items, such as "Original ideas or thoughts frequently come to me at work." It has Cronbach's α value of 0.830, implying high reliability.

Control variables. Employee demographics, including gender (1 = male, and 0 = female), age (1 = less than 26, 2 = 26-30, 3 = 31-35, 4 = 36-40, and 5 = more than 40), education level (1 = no high school degree, 2 = high school degree, 3 = some college, 4 = bachelor's degree and 5 = master's degree and above), profession (1 = manufacture, 2 = technology, 3 = R&D, 4 = marketing, 5 = others (such as human resource) and working time (1 = less than 1 year, 2 = 1-2 years, 3 = 2-5 years, 4 = 5-10 years, 5 = more than 10 years) were controlled in the current study, because these variables have a significant role in employee creativity (Shalley and Gilson, 2004).

Data analysis and results

Measurement test

The current study applied LISREL 8.7 and SPSS 18.0 to conduct data analysis. Before testing our hypotheses, we first conducted confirmatory factor analysis (CFA) for the major

variables. We used four variables: authoritarian leadership, LMX, team identification and employee creativity. We developed a baseline four-factor model and five alternative models and then tested chi-square differences to determine which model provided the better fit to the data. As shown in Table II, the baseline four-factor model fit the data well and provided a better substantial improvement in fit indices over the alternative models ($\chi^2 = 522.97$, df = 203, RMSEA = 0.070, SRMR = 0.047, CFI = 0.96, IFI = 0.96, and NFI = 0.94). Therefore, the major variables of this research had good discriminant validity.

Table III showed that Cronbach's alpha ranges from 0.794 to 0.888, indicating that all variables have acceptable reliability. The loadings of most items were higher than the 0.70 criterion. Although one item corresponded to power distance (0.666), the loadings of the item was significant; thus, reliability for the constructs was generally robust. Table III also showed that composite reliability ranges from 0.846 to 0.911, which were above the 0.70 recommended levels. All construct's average variance extracted (AVE) scores range from 0.579 to 0.718, which were higher than the 0.5 criterion. These results indicate that the convergent validity of our measurement instrument was good. This study also compared the relationship between the correlations among constructs and the square root of the AVE scores to assess the discriminant validity of the items. As indicated in Table IV, the AVE square roots of all variables are larger than the correlation coefficients among the variables. This finding confirms the discriminant validity of the measures.

Meanwhile, Table IV presented the results about the mean values, standard variance and correlations.

We further tested the common method bias, which referred to the artificial co-variation between predictor and criterion variables caused by the same data source, same raters, same measurement environment, same project context and features of the

Model	Factor	χ^2	df	$\Delta\chi$	RMSEA	SRMR	CFI	IFI	NFI
Basic model	Factor 4: AL, LMX, TI, EC	522.97	203		0.070	0.047	0.96	0.96	0.94
Model 1	Factor 3: AL + LMX, TI, EC	1453.29	206	930.32***	0.137	0.11	0.89	0.89	0.87
Model 2	Factor 3: AL + TI, LMX, EC	1394.55	206	871.58***	0.133	0.10	0.90	0.90	0.88
Model 3	Factor 3: AL, LMX + TI, EC	1222.61	206	699.64***	0.123	0.070	0.92	0.92	0.90
Model 4	Factor 2: AL + LMX + TI, EC	2109.01	208	1586.04***	0.168	0.12	0.85	0.85	0.83
Model 5	Factor 1: AL + LMX + TI + EC	2541.49	209	2018.52***	0.186	0.13	0.81	0.81	0.79

Notes: AL represents the authoritarian leader, LMX represents the leader–member exchange; TI represents the team identification; and EC represents the employee creativity; *$p < 0.001$, **$p < 0.001$, ***$p < 0.001$ and the same below

Table II. Comparison of measurement models

Variables	Items	Factors loading	Cronbach's alpha	Composite reliability	AVE
AL	5	0.783-0.840	0.865	0.887	0.662
Team identification	5	0.742-0.884	0.884	0.911	0.718
Leader–member exchange	7	0.700-0.837	0.888	0.882	0.651
Power distance	5	0.666-0.840	0.794	0.846	0.579
Employee creativity	5	0.737-0.818	0.830	0.863	0.611

Note: AL represents the authoritarian leadership

Table III. Composite reliability and AVE

Table IV.
Means, standard deviations and correlations ($N = 325$)

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. Gender	0.60	0.49	–	0.04	−0.05	0.04	0.01	0.03	−0.04	0.09	−0.05
2. Age	2.82	1.28	0.09	–	−0.27***	0.06	−0.11*	−0.08	0.13*	−0.08	0.08
3. Education level	3.01	0.86	−0.00	−0.21***	–	−0.06	−0.13*	−0.19**	−0.08	−0.06	0
4. AL	2.83	0.77	0.09	0.11*	−0.01	(0.814)	−0.31***	−0.40***	0.25***	−0.29***	0.02
5. LMX	3.73	0.54	0.06	−0.05	−0.07	−0.24***	(0.807)	0.55***	−0.16**	0.39***	0.14*
6. TI	4.05	0.52	0.08	−0.03	−0.13*	−0.33***	0.57***	(0.847)	−0.20**	0.41***	0.12*
7. PD	2.37	0.68	0.01	0.17**	−0.03	0.29***	−0.10	−0.14*	(0.761)	−0.15**	0.05
8. creativity	3.83	0.57	0.14*	−0.03	−0.01	−0.23***	0.42***	0.44***	−0.09	(0.782)	0.02
9. Formalization (MV marker)	3.79	0.55	−0.00	0.13*	*0.05*	0.07	0.18**	0.16**	0.10	0.07	–

Notes: $n = 325$. Unadjusted correlations appear below the diagonal; correlations adjusted for common method appear above the diagonal; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$, two-tailed. Values in parentheses on the diagonal are the square roots of the AVE of each variable; the italic data in this table is not significant (>0.05)

items (Podsakoff *et al.*, 2012). Common method bias may threaten the validity of the study given that all data were collected from a single source at a single point in time. Two methods were applied to test the possible common method variance (CMV). First, according to Harman's one-factor test (Podsakoff and Organ, 1986), the results showed that five factors that accounted for 62.605 per cent of variance were extracted, and the first factor accounted for 15.980 per cent. Thus, although data were collected from the same source, CMV was not a major contaminant for our results. Second, following the guidelines of Podsakoff *et al.* (2012), we selected employees' perception of formalization (Hirst *et al.*, 2011), which is theoretically unrelated to the substantive variables, as the marker variable. As shown in Table IV, the significant correlations remained significant after adjustment.

Test of the structural model

The current study analyzed a series of nested models to test the hypotheses proposed above. The results are shown in Table V. Specifically, Model 1 was a baseline model that included all the hypotheses mentioned in this paper. Model 1 included the direct path from authoritarian leadership to LMX and team identification, the direct path from LMX to team identification and employee creativity and the direct path from team identification to employee creativity. All the fitting coefficients of the baseline model are acceptable (χ^2 = 524.73, df = 204, RMSEA = 0.070, SRMR = 0.049, CFI = 0.96, IFI = 0.96 and NFI = 0.94).

We further tested the other four nested models, as stated in Table V. Compared with Model 1, Model 2 deleted the direct path from authoritarian leadership to team identification. Model 2 described LMX as the complete mediator between authoritarian leadership and team identification. Model 3 described team identification as the complete mediator between LMX and employee creativity by deleting the direct path from LMX to employee creativity. Model 4 described LMX and team identification as the complete mediators between authoritarian leadership and employee creativity by eliminating the direct path from LMX to team identification. Model 5 described that both LMX and team identification were partial mediators between authoritarian leadership and employee creativity.

Table V indicated that Model 2 had a significant difference from Model 1 ($\Delta\chi^2$ = 10.65, $p < 0.001$), and the fitting index was poor, which showed that complete mediation between authoritarian leadership and team identification was not sufficient to consider for the total relationship between the two variables. Similarly, Models 3 ($\Delta\chi^2$ = 12.91, $p < 0.001$), 4 ($\Delta\chi^2$ = 91.23, $p < 0.001$) and 5 ($\Delta\chi^2$ = 77.86, $p < 0.001$) had significant differences from Model 1, and their fitting indexes were poor. This finding showed that the two mediating variables (LMX and team identification) in the relationship between authoritarian leadership and employee creativity might be related. Based on the rule and principle of "model

Models	Structural models	χ^2	df	$\Delta\chi^2$	RMSEA	SRMR	CFI	IFI	NFI
1	Baseline model	524.73	204		0.070	0.049	0.96	0.96	0.94
2	Delete path: AL → TI	535.38	205	10.65***	0.071	0.061	0.96	0.96	0.94
3	Delete path: LMX → EC	537.64	205	12.91***	0.071	0.056	0.96	0.96	0.94
4	Delete path: LMX → TI	615.96	206	91.23***	0.078	0.15	0.95	0.95	0.93
5	Delete path: LMX → TI, increase path: AL → EC	602.59	204	77.86***	0.078	0.13	0.95	0.95	0.93

Table V.
Comparison among structural equation models

Notes: AL represents the authoritarian leadership; LMX represents the leader–member exchange; TI represents the team identification; EC represents the employee creativity; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ and the same below

parsimony," we assumed that Model 1 is the best matching model. Therefore, we considered that LMX and team identification played their mediating roles between authoritarian leadership and employee creativity, respectively, which verified *H1* and *H2*.

Table VI showed the standard path coefficients estimated in Model 1. The result (Table VI and Figure 2) showed that authoritarian leaders had a negative relationships with both LMX ($\beta = -0.27$, $p < 0.001$) and team identification ($\beta = -0.20$, $p < 0.001$). Both LMX and team identification had positive influences ($\beta = 0.28$, $p < 0.001$; $\beta = 0.34$, $p < 0.001$, respectively) on employee creativity. These findings supported the proposed research framework.

Further, the current study applied the bias-corrected bootstrapping procedure proposed by Preacher and Hayes (2008) to test the mediation role of LMX and team identification in the relationship between authoritarian leadership and employee creativity to verify their mediating effect. Table VII displayed the indirect effects, standard bias and 95 per cent confidence interval of indirect effect. This table showed that the indirect relationship between authoritarian leadership and employee creativity through LMX was negative and significant (indirect relationship = −0.069, $p < 0.001$), which supported *H1*. Meanwhile, the result presented the indirect relationship between authoritarian leadership and employee creativity through team identification was significant (indirect relationship =−0.097, $p < 0.001$), which supported *H2*.

According to the three-path-mediated effect testing method proposed by Taylor *et al.* (2007), as presented in Table VII, the results further indicated that the indirect relationship between authoritarian leadership and employee creativity involving two mediators – LMX and then team identification – was significant (indirect relationship = −0.053, $p < 0.001$). Therefore, *H3* was supported.

Test of the moderating effects

This study adopts hierarchical moderated regression analyses to test *H4a* and *H4b*. Control variables are entered in Step 1. The independent variable is entered in Step 2. The moderator is entered in Step 3. Finally, the interaction term is entered.

Table VI. Path coefficients of the structural equation model

Path	Path coefficient
Authoritarian leadership → LMX	−0.27***
Authoritarian leadership → Team identification	−0.20***
LMX → Team identification	0.58***
LMX → Employee creativity	0.28***
Team identification → Employee creativity	0.34***

Note: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ and the same below

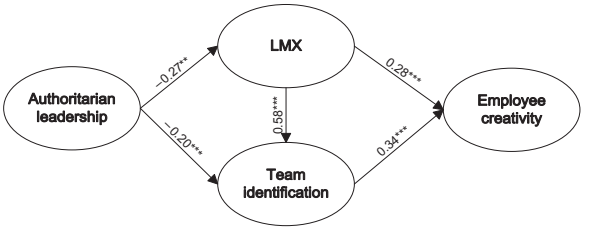

Figure 2. Path coefficients of the structural model

Path	Indirect effect	SE	Lower limit 95% CI	Upper limit 95% CI
Bootstrapping				
Authoritarian leadership → LMX → Team identification	−0.084***	0.029	−0.142	−0.029
LMX → Team identification → Employee creativity	0.181***	0.043	0.101	0.270
Three-path mediation				
Authoritarian leadership → LMX → Employee creativity	−0.069***	0.024	−0.117	−0.024
Authoritarian leadership → Team identification → Employee creativity	−0.097***	0.024	−0.151	−0.056
Authoritarian leadership → LMX → Team identification→ Employee creativity	−0.053***	0.019	−0.112	−0.015

Notes: The iterations are 1,000 times; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ and the same below

Table VII. Results of mediating effects test

Consistent with our hypotheses, results show that employees' power distance moderates the direct relationship between authoritarian leadership with LMX. As shown in Table VIII, the interaction between authoritarian leadership and power distance is positively related to LMX ($\beta = 0.345$, $p < 0.001$, Model 4). Figure 3 shows that authoritarian leadership is more negatively related to LMX when power distance is low ($r = 0.44$, $p < 0.001$) rather than high ($r = 0.06$, ns). Accordingly, *H4a* is supported.

H4b suggested a negative moderating role of power distance in the relationship between authoritarian leadership and team identification. In Model 8 of Table VIII, we found that the interaction between authoritarian leadership and power distance was significant (($\beta = 0.230$, $p < 0.001$). The results of the simple slope analysis (Aiken and West, 1991) presented that the relationship between AL and TI was not significant (simple slope= −0.10, n.s) at high power distance, and was negatively significant (simple slope = −0.45, $p < 0.001$) at low power distance. These results, therefore, supported *H4b* (Figure 4).

	LMX				Team identification			
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Gender	0.067	0.088	0.088	0.058	0.111	0.140*	0.140*	0.120*
Age	−0.034	−0.003	0.003	0.023	−0.035	0.007	0.016	0.030
Education level	−0.086	−0.083	−0.084	−0.028	−0.154**	−0.150**	−0.151**	−0.114*
Profession	0.020	0.023	0.026	0.035	0.068	0.072	0.078	0.084
Working time	−0.059	−0.069	−0.070	−0.091	−0.050	−0.064	−0.065	−0.079
AL		−0.241***	−0.231***	−0.184**		−0.327***	−0.310***	−0.278***
PD			−0.036	−0.101			−0.059	−0.102
AL× PD				0.345***				0.230***
R2	0.015	0.072	0.074	0.184	0.033	0.138	0.141	0.190
ΔR2	0.015	0.057	0.001	0.110	0.033	0.104	0.003	0.049
F	1.002	4.138**	3.596**	8.879***	2.209	8.478***	7.430***	9.267***
ΔF	1.002	19.526***	0.388	42.563***	2.209	38.522***	1.126	19.147***

Note: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ and the same below

Table VIII. Results for moderation effects analysis

Discussion and implications

Our primary objective for this study was to understand how and when authoritarian leadership affects employee creativity. To our knowledge, this is the first study that attempts to simultaneously explore how LMX and team identification play as two important mediating processes in the relationship between authoritarian leadership and employee creativity. In addition, our findings proved that power distance can offset the negative effects of authoritarian leadership on employee creativity. The current research findings extend our understanding of authoritarian leadership and make several important contributions to the creativity literature.

Theoretical implications

This study offers the following important theoretical contributions. First, this study proves that authoritarian leadership is negatively related to employee creativity, which is consistent with recent research on the negative effect of authoritarian leadership on employees' attitude and behaviors (Liang *et al.*, 2007; Schaubroeck *et al.*, 2017; Zhang and Xie, 2017). Although much attention has been focused on authoritarian leadership, research on the relationship between authoritarian leadership and employee creativity has been largely ignored, with the exception of Zhang *et al.*'s (2011) study which empirically

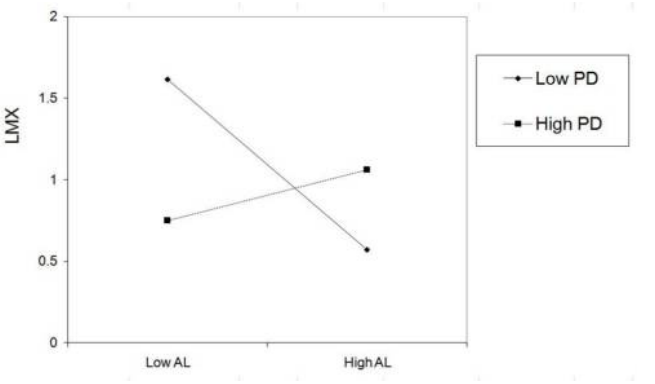

Figure 3.
Moderating effect of power distance on the relationship between AL and LMX

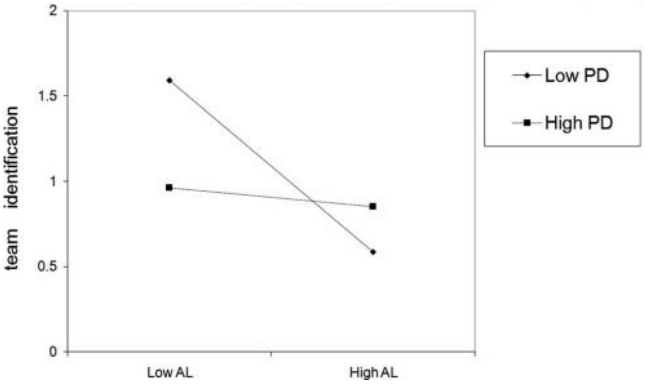

Figure 4.
Moderating effect of power distance on the relationship between AL and TI

confirmed the negative relationship between authoritarian leadership and group creativity at the group level. To our knowledge, the current study is the first study to empirically test the relationship between authoritarian leadership and creativity at the individual level. Therefore, our research deepens our understanding of the complex relationships relationship between authoritarian leadership and creativity.

Second, this study expands social exchange theory and facilitates the integration of authoritarian leadership and LMX/team identification to develop an integrated theoretical perspective. The primary contribution of the current study is the identification of two important psychological processes, namely, LMX and team identification, that reveal the relationship of authoritarian leadership to employee creativity. Blau's (1964) previous research proposed social exchange theory as an important perspective by which leaders influence employees' creativity. Along this line, we found LMX and team identification to be important mediating variables in the authoritarian leadership–employee creativity relationship. Chen *et al.*'s (2014) was the only research available that tested the psychological mechanisms through which authoritarian leaders can impact employee outcomes. Therefore, we contribute to the authoritarian leadership literature by identifying LMX and team identification as powerful mechanisms and address prior calls for future studies on the need to identify psychological processes that link authoritarian leadership to follower outcomes (Schaubroeck *et al.*, 2017). Moreover, this study provides insights into the social exchange theory and LMX literature by proposing LMX as a mediator role in the authoritarian leadership–creativity relationship. Thus, our research echoes previous studies which attempted to use the social exchange theory as a theoretical framework linking authoritarian leadership and outcomes (Chen *et al.*, 2014; Pellegrini *et al.*, 2010).

Third, our findings extend our understanding about the relationships among LMX, team identification and creativity. Although LMX and team identification are two important organizational behavior constructs in the field of creativity, minimal is known about the relationship between the two (Loi *et al.*, 2014). The finding presented that LMX can be related to employee creativity through team identification. This finding broadens the understanding of the relationship between LMX and employee creativity. This indicates that LMX cannot be related to employee creativity in a direct and simple manner, as it does through team identification. Thus, the current study indicates that team identification could play as the important mediating mechanism for LMX to affect employee creativity, thereby supporting the call of scholars in "exploring more mediating mechanisms from LMX to employee result variables" (Loi *et al.*, 2014). This study explores the chain-mediating effect between LMX and employee creativity and therefore makes a significant contribution to the creativity literature.

Finally, the findings of the current study confirm the moderating influence of power distance on the relationship between authoritarian leadership and LMX/team identification. Although a universal effect has dominated the research on the effects of authoritarian leadership, this effect may be shaped by contingency factors, such as cultural values (Ning *et al.*, 2012). Support for *H4a* and *H4b* suggested that although the authoritarian leadership is negatively related to LMX and team identification, such is the case for employees with low power distance. Few endeavors have been devoted to exploring the moderating role of power distance in the leadership process (Lin *et al.*, 2013; Wang *et al.*, 2012). The current research complements the findings of these endeavors and deepens our understanding on power distance by empirically examining the moderating effect of power distance in the relationship authoritarian leadership and LMX/team identification.

Practical implications

Our study has several important managerial implications. First, we suggest both firms and managers recognize and take actions to reduce the negative effects of authoritarian leadership. Effective selection system and interventional mechanisms, which contribute to quickly identifying and preventing authoritarian leadership, should be established and put into practice. For instance, the HR department should give careful consideration before providing managerial positions for those with high levels of authoritarian leadership disposition. Firms should internally strengthen the cultivation and training of managers. For instance, firms could introduce other leadership styles to managers or present negative feedback from employees. By contrast, managers should constantly evaluate their leadership style and avoid using authoritarian leadership in managing subordinates. Given that authoritarian leadership is an important factor in influencing employee creativity, firms should establish the rules or mechanism to prevent managers from abusing authoritarian leadership. For example, "employee complaint mechanism" and "voice channel" should be well implemented to avoid damaging authoritarian leadership.

Second, the results of our study suggest a negative relationship between authoritarian leadership and employee creativity by considering LMX and team identification as mediating mechanisms. Therefore, enhancing employee creativity by building employees' sense of team belongingness and high-quality relationships with leaders is helpful. LMX and team identification can be promoted by taking improving communications and increasing team-building activities that will strengthen leader–employee relationship. Once strong LMX and identification are achieved, employees are likely to increase effort, thereby enhancing their creativity. In fact, China, by nature, is a relationship society, and being "a part of the band" is important. Therefore, managers should establish and maintain good relations with subordinates, which enhances creativity.

Third, the moderated hypotheses test results suggest that the negative effect of authoritarian leadership is contingent on individual cultural value factors. Our findings suggest that employees with low power distance are unlikely to yield to LMX and team identification. Thus, low power distance may cause resistance to management initiatives and lead to conflicts with leaders. Thus, managers may need to engage in behaviors other than authoritarian leadership to motivate employees low in power distance. For instance, leaders of such employees may need to exhibit an empowering or transformational leadership style that provides employees with freedom in task execution and consideration to employees. Once authoritarian leadership occurs in teams or organizations, employee interventions, especially to those with lower power distance, should be conducted to attenuate the negative effects of authoritarian leadership.

Limitations and future research

The limitations should be highlighted with the theoretical and practical implications of the current study are discussed. First, this study tested the hypotheses based on cross-sectional data. Although our results indicate that common method bias is not a critical issue in the current study, self-reported data still impose limits on the current study. Collecting data from both employees and leaders, and integrating the data from different sources, with the goal of reaching more objective study results, would be helpful.

Second, because employees' innovative behavior may go through dynamic changes, the cross-sectional approach creates another limit to our study. Indeed, we reported the significant relationships as associative and correlational, which may not be causal. Because the relationship between collectivism and innovative behavior may play out as a gradual process, a longitudinal study could help enrich our understanding by offering information

on their causal relationships and allow scholars to examine how authoritarian leadership influences employee creativity through team identification and LMX. The longitudinal design would help reduce common method bias, even if our test indicated that this bias was not serious in the present study. Thus, to interpret the potential causal relationships among the above variables, the longitudinal approach can be introduced into future studies.

Third, the current study only considered the mediating process of LMX and team identification, which could be extended through exploring other mediators. Indeed, our findings only present the partially mediating effects of LMX on the authoritarian leadership–creativity relationship. Thus, we call for future research to explore additional mediators to extend our understanding on how and why authoritarian leadership influences employee creativity.

Finally, this research was conducted in China and focused only on one cultural value factor, which is power distance. Other cultural differences should be included in further research, such as *face* and collectivism/individualism, because the consequences of authoritarian leadership on employee creativity may vary with different cultural backgrounds. Thus, more studies should consider other cultural value factors embedded in various contexts.

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