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Creativity under workload pressure and integrative complexity: The double-edged sword of paradoxical leadership☆

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ABSTRACT

Modern-day organizations often demand creativity, but motivating creativity under unfavorable conditions such as high workload pressure is difficult. Integrating paradox theory and social cognitive theory, we conceptualize creativity as a process that involves tensions among competing goals and demands, and those tensions become salient under high workload pressure. We propose that learning to constructively deal with such salient tensions is important for the development of creativity and that paradoxical leader behavior (PLB) may stimulate creativity by enhancing employees' creative self-efficacy (CSE) in such challenging situations. However, PLB will only promote CSE and employee creativity when employees have a high level of integrative complexity to accept and appreciate the complex and paradoxical behaviors of the leader. Based on data from 252 employee-supervisor dyads, we found that through CSE, PLB was most effective in promoting employee creativity when workload pressure and integrative complexity were both high. However, PLB was less effective for promoting CSE and creativity when workload pressure was low, or when workload pressure was high while integrative complexity was low. Implications and limitations of our research are discussed.

1. Introduction

Employee creativity is essential for organizational innovation, survival, and growth in complex and dynamic environments (Anderson, Potočnik, & Zhou, 2014; Zhou & Hoever, 2014). Motivating employee creativity, however, is challenging because generating creative ideas requires individuals to move away from existing solutions, to try out different alternatives, and to risk failure. Motivating creativity becomes even more challenging when employees face high workload pressure, because this often leads individuals to prioritize activities that are more certain and controllable over creative actions (Elsbach & Hargadon, 2006; Ford, 1996). Because workload pressure is a fact in many modern organizations (Reid & Ramarajan, 2016), an important question for scholars as well as for leaders is how to foster employee creativity under such unfavorable conditions.

In this article, we integrate paradox theory (Smith & Lewis, 2011) with social cognitive theory (Bandura, 1977, 1986) to examine how leaders may foster creative self-efficacy (CSE) among employees in high workload pressure situations. Previous research suggests that to initiate and sustain creative efforts, it is essential that individuals feel efficacious about their competence in creative activities (Tierney & Farmer, 2002). Indeed, research has shown CSE is a critical predictor of creativity at work (Farmer & Tierney, 2017; Tierney & Farmer, 2011). It is also a key mediating mechanism between situational and personal factors, including different leadership styles and creative performance (Chong & Ma, 2010; Gong, Huang, & Farh, 2009; Liu, Jiang, Shalley, Keem, & Zhou, 2016; Shin & Zhou, 2007; Tierney & Farmer, 2004). However, few studies have investigated factors that fuel creative self-efficacy in highly demanding situations.

Paradox theory (Smith & Lewis, 2011) provides a unique perspective on this issue, for three reasons. First, creativity is a process that inherently involves tensions and paradoxes: competing demands, goals, interests, and perspectives that persist over time (Bledow, Frese, Anderson, Erez, & Farr, 2009; Hill, Brandeau, Truelove, & Lineback, 2014; Schad, Lewis, Raisch, & Smith, 2016). Thus, creativity requires novelty *and* usefulness (Miron-Spektor & Beenen, 2015), exploration

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and exploitation (Rosing, Frese, & Bausch, 2011), divergent *and* convergent thinking (Miron-Spektor & Erez, 2017), and cognitive flexibility *and* cognitive persistence (Nijstad, De Dreu, Rietzschel, & Baas, 2010). Second, paradox theory suggests that these tensions become salient especially when situations are difficult, such as under conditions of high demands (e.g., high workload pressure; Lewis & Smith, 2014). In more benign situations, tensions remain latent because employees can address each goal or demand without compromising or inhibiting others. Third, paradox theory suggests that one may deal with salient tensions and paradoxical demands in a constructive way, leading to learning and growth; or in a defensive way, leading to anxiety and stagnation (Miron-Spektor, Ingram, Keller, Smith, & Lewis, 2018; Smith & Lewis, 2011). Constructively dealing with tensions requires that tensions are recognized, and that competing demands and goals are integrated, which may lead to learning and can potentially fuel employee CSE.

We focus on the role of paradoxical leader behavior (PLB): leader behaviors that are "seemingly competing, yet interrelated, to meet competing workplace demands simultaneously and over time" (Zhang, Waldman, Han, & Li, 2015, p. 538). Drawing on social cognitive theory (Bandura, 1977, 1986), we propose that PLB can promote CSE through role modelling and by establishing a supportive environment conducive to managing tensions. Following paradox theory, we further propose that PLB will be effective especially in conditions of high workload pressure, because only then do paradoxical tensions become salient and PLB becomes relevant for helping employees deal with salient tensions, and that PLB only raises CSE among employees with sufficient cognitive capability to understand and profit from the complex and paradoxical behaviors of the leader. We focus on integrative complexity, defined as the extent to which individuals are willing and capable to accept competing aspects of an issue and establish conceptual links among these competing aspects (Suedfeld & Bluck, 1993; Suedfeld, Tetlock, & Streufert, 1992). In sum, we expect that PLB may stimulate CSE and creativity in situations of high workload pressure, but only among employees with high integrative complexity. In turn, we expect that CSE will be positively related to employee creativity (see Fig. 1).

This research makes several unique contributions to the literature. We propose that PLB is particularly useful under high workload pressure, and thereby advance our understanding of how leaders can promote CSE and creativity even in stressful circumstances. Secondly, we suggest that workload pressure may not always be negative, but in the right conditions can lead to learning (i.e., CSE) and creativity. Moreover, we draw on paradox theory to explain for whom and when PLB would be beneficial, which advances the paradoxical leadership literature by clarifying boundary conditions of the relationship between PLB and creativity (Zhang et al., 2015). Finally, we examine the effectiveness of PLB in a Western context, which contributes to the generalizability of PLB from its original Eastern context.

2. Theory and hypotheses

Creativity is conceptualized as the generation of ideas that are both original and useful (Amabile, 1983). Building on social cognitive theory (Bandura, 1977, 1986), previous research suggests that one important way in which leaders affect employee creativity is by building creative self-efficacy (CSE). Pursuing excellence in challenging situations necessitates a resilient sense of self-efficacy (Bandura & Locke, 2003) and domain-specific self-efficacy is a robust predictor of performance in that domain (Bandura, 1986; Tierney & Farmer, 2011). CSE, defined as one's efficacy beliefs related to the skills and ability to produce creative outcomes (Tierney & Farmer, 2002), has been shown to predict employee creativity and to mediate effects of various factors on creativity (Gong et al., 2009; Shin & Zhou, 2007; Tierney & Farmer, 2004). Indeed, CSE is a unique, positive predictor of employee creativity, even after accounting for intrinsic and prosocial motivation (Liu et al., 2016). CSE is conceived as malleable (Tierney & Farmer, 2011), and leadership has been shown to be an important predictor of employee CSE (e.g., Chong & Ma, 2010; Gong et al., 2009; Shin & Zhou, 2007).

However, few studies have looked at how leaders can fuel CSE in challenging, demanding situations. This is important because employees are increasingly required to work with intensified job demands and high time pressure (Reid & Ramarajan, 2016). Ironically, to survive and compete in increasingly complex and dynamic environments, organizations have a strong need for employees' creativity, which may be negatively affected by workload pressure (e.g., Amabile, Conti, Coon, Lazenby, & Herron, 1996): high workload pressure often leads individuals to prioritize activities that are more certain and controllable (e.g., exploitation) over uncertain, creative actions (e.g., exploration) that are less controllable (Elsbach & Hargadon, 2006; Miron-Spektor et al., 2018). In this study, we therefore examine how leaders can build CSE and creativity in high workload pressure situations by integrating social cognitive theory and paradox theory.

2.1. Paradox theory

Paradox theory (Smith & Lewis, 2011) is a meta-theoretical framework that provides insights into the sources, nature and outcomes of organizational tensions. Paradoxical tensions denote contradictions between competing demands, processes, perspectives that persist over time (Schad et al., 2016; Smith & Lewis, 2011). The central tenet of paradox theory is that paradoxical tensions can be rendered salient by situational factors such as resource scarcity, plurality and change, and that salient tensions can be a double-edged sword. That is, salient tensions can spur a virtuous cycle that enhances creativity, innovation, and sustainability, but tensions can also lead to a vicious cycle that increases anxiety and defensiveness (Miron-Spektor et al., 2018; Smith & Lewis, 2011). Paradox theory further suggests that individuals vary in their ability and resources to constructively react to salient tensions.

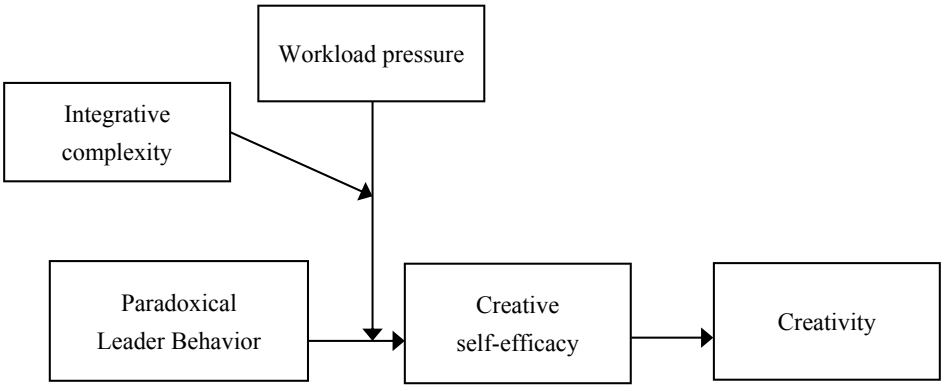

Fig. 1. The conceptual model.

In recent years, creativity is increasingly understood as a process that involves paradoxical tensions. The paradox perspective suggests that to be creative, individuals are required to both break assumptions and rules *and* to adhere to boundaries and constraints (Guilford, 1957), to make use of both divergent *and* convergent thinking (Miron-Spektor, Gino, & Argote, 2011; Sowden, Pringle, & Gabora, 2015), to adopt both learning *and* performance achievement goals (Miron-Spektor & Beenen, 2015), to work with both passion *and* discipline (Andriopoulos & Lewis, 2009), and to be both cognitively flexible *and* cognitively persistent (Nijstad et al., 2010). The experience of contradictory yet interrelated goals, processes, and demands makes creativity challenging (Miron-Spektor & Erez, 2017). Furthermore, to engage in creative activities takes time and other resources, which may be at odds with performing day-to-day activities (e.g., Ford, 1996; Miron-Spektor et al., 2018). For example, ambidexterity theory suggests that individuals may experience a tension between using time and other resources for exploitation (using existing competencies to perform daily tasks) and exploration (developing new competencies through search, experimentation, and creativity) (e.g., Bledow et al., 2009; Mom, Van den Bosch, & Volberda, 2009; Rosing et al., 2011).

Applying paradox theory to creativity has generated insights into how individuals can cope with paradoxical tensions to achieve creativity. For instance, Miron-Spektor and Beenen (2015) found that both learning and achievement goal orientations are necessary for achieving creativity, because novelty and feasibility are facilitated by those different motivations. Research has also found that individuals who were primed with a paradoxical mindset to embrace seemingly contradictory elements demonstrated higher creativity as compared with those who were not (Miron-Spektor et al., 2011). However, few studies have paid attention to the work context in which tensions of creativity are manifest, or to the external resources that individuals need to cope with manifest paradoxical tensions.

2.2. Paradoxical Leader Behavior (PLB)

In dynamic and complex business environments, leaders face contradictory, paradoxical demands and challenges (Smith, Lewis, & Tushman, 2016; Waldman & Bowen, 2016; Zhang et al., 2015). Thus, leaders need to meet both structural organizational demands that emphasize order, control, and stability, and follower demands that emphasize freedom, autonomy, and flexibility (Zhang et al., 2015). Similarly, leaders have to manage the paradox between agency and communication inherent to leadership behavior, and between continuity and change inherent to dynamic environments (Waldman & Bowen, 2016). To effectively respond to paradoxical challenges, leaders need to perform multiple and contradictory roles (Denison, Hooijberg, & Quinn, 1995), adopting paradoxical behavior (Lewis, Andriopoulos, & Smith, 2014; Waldman & Bowen, 2016; Zhang et al., 2015). In contrast to calculated decision making or compromising, paradoxical leaders accept the persistent contradiction between paradoxical challenges and seek to synergize and integrate them within a larger system (Zhang et al., 2015). In turn, this enables organizations to not only survive, but also continuously innovate (Smith & Lewis, 2011).

PLB is defined as leader behaviors that are "contradictory yet interrelated, to meet competing workplace demands simultaneously and over time" (Zhang et al., 2015, p. 538). Zhang and colleagues conceptualized PLB as a behavioral syndrome that consists of five dimensions: (1) combining self-centeredness with other-centeredness, (2) maintaining both distance and closeness, (3) maintaining decision control, while allowing autonomy, (4) enforcing work requirements, while allowing flexibility, and (5) treating subordinates uniformly, while allowing individualization. These authors found that PLB contributed positively to employee proactivity, proficiency, and adaptivity, even after accounting for traditional leadership approaches such as transformational and transactional leadership.

These five dimensions address different paradoxes, but when considering creativity, the balance between control and autonomy and between structure and flexibility are most relevant (Lewis, 2000; Smith & Lewis, 2011). Instead of assuming that autonomy/freedom is good and control/constraint is bad for creativity, recent research showed that autonomy/freedom and control/constraint have inconsistent, paradoxical relationships with creativity, showing both positive and negative effects (e.g., Caniëls & Rietzschel, 2015; Roskes, 2015; Rosso, 2014). We consequently focused on the two dimensions of control and autonomy, and enforcing work requirements and flexibility, which together embody the "loose-tight" paradox in management (Sagie, 1997; Zhang et al., 2015). Thus, we focus on leader behavior ensuring control over subordinate behavior and decision making, while also granting employees discretion to work flexibly and autonomously.

2.3. Paradoxical leader behavior and creative self-efficacy

Individuals derive information and cues from their interpersonal environment to form efficacy judgements (Bandura, 1997; Gist & Mitchell, 1992). One of the most immediate and dominant cues in work contexts is the leader who clarifies group goals and visions, controls critical resources and information, and provides rewards and punishments (Amabile, Schatzel, Moneta, & Kramer, 2004). Indeed, research has shown that leader behaviors strongly shape employee efficacy beliefs (Chong & Ma, 2010; Gong et al., 2009; Tierney & Farmer, 2002).

Social cognitive theory suggests that four sources of information drive the formation of efficacy views: mastery experience, vicarious experience or modelling, verbal persuasion, and physiological arousal. In our context, role modelling and mastery experience are the most relevant. First, paradoxical leaders can be role models for employees, showing employees how to deal with paradoxical tensions in a complex environment (Zhang et al., 2015). Such vicarious learning is one of the main drivers of the development of self-efficacy (Bandura, 1982), and research supports that leaders can increase followers' self-efficacy by role modelling targeted behaviors (Gong et al., 2009; Walumbwa et al., 2011). When leaders behave paradoxically and deal with tensions and paradoxes at work constructively, they provide employees with the chance to observe, make sense of, and reflect on their own handling of tensions at work (Zhang et al., 2015). As a result, employees might become more self-efficacious when encountering paradoxical tensions during creative task performance.

Second, by showing both control-focused and autonomy-focused behavior, PLB can create a conjoint bounded *and* autonomous work environment that is conducive to mastery experiences (Zhang et al., 2015). By emphasizing high work requirements and maintaining decision control, paradoxical leaders create a structured, bounded work environment. This helps employees understand work goals, norms and constraints, which is beneficial for achieving useful, practical outcomes at work. Simultaneously, paradoxical leaders construct an autonomous work environment by granting autonomy and flexibility. This supports employees in experimenting with original solutions (Zacher, Robinson, & Rosing, 2014), enhances intrinsic motivation (Ryan & Deci, 2000), and encourages creative behavior (Liu, Chen, & Yao, 2011), which promotes the attainment of novel ideas. This aligns with the ambidexterity literature, which suggests that leaders can support innovation by showing both opening behaviors that encourage exploration and closing behaviors that focus on exploitation (Rosing et al., 2011; Zacher et al., 2014). Because PLB creates a supportive environment to manage tensions in creativity, employees can gain successful experiences of producing creative outcomes, which strengthens their CSE.

Although more indirectly, PLB may also affect CSE by reducing negative physiological arousal. Because PLB can create a supportive environment to manage the paradoxical challenges involved in creativity, employees are less likely to experience aversive physiological arousal (e.g., stress, anxiety) when engaging in creativity, which helps sustain CSE (Gong et al., 2009). In addition, because paradoxical leaders can see the connection between contradictory demands, they can

convince employees through verbal communication that it is possible to manage competing demands. As a result, employees may feel more efficacious when encountering contradictory goals and demands in creative tasks, resulting in higher CSE.

2.4. The role of workload pressure

Although PLB can potentially enhance employees' CSE, paradox theory (Lewis & Smith, 2014; Miron-Spektor et al., 2018; Smith & Lewis, 2011; Zhang et al., 2015) suggests that PLB may be more effective in situations in which paradoxical tensions become salient, such as when workload pressure is high. Workload pressure is defined as the extent to which individuals are required to work fast and have too much work to do (Bakker, Evangelia, & Verbeke, 2004; Spector & Jex, 1998; Voydanoff, 2005). It concerns how much work one has to do in a certain period of time, covering both the quantity and pace of work, and is therefore closely related to time pressure. Interestingly, the effects of workload and time pressure on creativity are inconsistent (Gutnick, Walter, Nijstad, & De Dreu, 2012). Some studies suggest a negative association between workload pressure and creativity (e.g., Amabile et al., 1996), whereas others show a positive relationship (e.g., Janssen, 2000). Similarly, Andrews and Smith (1996) found that time pressure has a negative effect on creativity, while Baer and Oldham (2006) found a curvilinear relationship, and Mehta and Zhu (2016) even found a positive association between time pressure and creativity.

We propose that workload pressure increases the salience of paradoxical tensions, and that PLB becomes more relevant when workload pressure is high. According to paradox theory, tensions often remain latent, but become salient when environmental conditions (e.g., resource scarcity, change, and plurality) prompt actors to see elements, such as specific behaviors or goals, as contradictory. Specifically, Lewis and Smith (2014) pointed out that rising demands and declining resources accentuate conflict and paradoxical tension. When workload pressure is high, the time and energy resources for addressing different goals declines, and employees will experience tensions between competing demands and activities (e.g., Moeini et al., 2008). Under these conditions, PLB will be a useful resource to prevent a one-sided focus on day-to-day activities at the expense of creativity, or a focus on only one side of paradoxical demands in the creative process, which may help employees build CSE. Accordingly, when employees experience tensions because of workload pressure, PLB becomes a useful resource for managing tensions. In contrast, when workload pressure is low, tensions remain latent because employees can address each goal or demand without compromising or inhibiting other goals or demands. Under these conditions, paradoxical tensions are not salient, PLB is largely irrelevant, and will not be related to CSE.

2.5. The role of integrative complexity

Paradox theory suggests that there may be individual differences in how employees deal with tensions at work. We therefore propose that effects of PLB on CSE further depend on employee integrative complexity. This resonates with conclusions from contingency theories of leadership (e.g., Fiedler, 1964) that the effectiveness of leadership depends on whether leader behaviors fit follower characteristics, traits, and circumstances (Howell & Shamir, 2005; Uhl-Bien, Riggio, Lowe, & Carsten, 2014). Research has suggested that this is also the case for PLB, and that the effectiveness of PLB depends on whether employees endorse leaders' paradoxical thinking and behavior (e.g., Zhang et al., 2015).

Integrative complexity, originating from personal construct theory (Kelly, 1955), captures the complexity of cognition in terms of the willingness and capability to understand the environment in a differentiated and integrated manner (Suedfeld et al., 1992; Zhang et al., 2015). Differentiation refers to forming different, competing perspectives, and integration refers to forging conceptual links between those perspectives (Suedfeld et al., 1992). Individuals develop increasingly complex cognition by successfully dealing with various situational demands in different social roles (Hannah, Balthazard, Waldman, Jennings, & Thatcher, 2013). High integrative complexity enables individuals to make sense of their environment with differentiated perspectives and to understand how differentiated perspectives can coexist and both be valid, which promotes effective adaptation in changing, complex situations. Individuals with low integrative complexity are less able to differentiate various elements and integrate those elements within an existing knowledge structure (Hannah et al., 2013), and are less able to adapt to complex environments.

Social cognitive theory emphasizes the importance of observers' cognitive capability in social learning process (Bandura, 1977). When the modelled behavior involves high levels of complexity, observers' cognitive ability to attend, retain, and process the complex information associated with modelled behavior becomes critical for successful learning. PLB involves seemingly inconsistent, complex, and conflicting behaviors that may cause discomfort and cognitive dissonance among employees. To learn from PLB, employees need to have the ability to accept and appreciate contradictory behaviors and understand how they are integrated and combined. Otherwise, employees might feel conflicted about the inconsistency in leaders' behavior and experience negative affect (Harmon-Jones, 2000), which could decrease their CSE (Gong et al., 2009). We propose that employees with high integrative complexity are more receptive to PLB, as compared to those with low integrative complexity, and they learn from PLB more effectively.

In sum, paradox theory suggests that in situations of workload pressure, and particularly for employees high in integrative complexity, PLB is effective in enhancing CSE. First, in situations of high workload pressure, tensions become manifest, which makes paradoxical leaders more desirable role models for learning. Second, however, individuals do not necessarily embrace tensions as opportunities to be creative, and integrative complexity is an important individual difference factor that enables individuals to recognize and accept tensions. Thus, PLB will have the strongest positive effect on CSE for employees with high integrative complexity who work in situations of high workload pressure. In contrast, we propose that individuals with low integrative complexity will not benefit from PLB to the same degree, because they lack the cognitive resources to deal with this complex leader behavior. Further, under conditions of low workload pressure, PLB is less relevant, because tensions do not need to be directly addressed, and PLB will be less strongly associated with CSE. We thus propose:

Hypothesis 1. PLB, employee integrative complexity, and workload pressure interact to affect employee CSE in such a way that when workload pressure and integrative complexity are both high, PLB has the strongest positive relationship with CSE.

2.6. The mediating role of creative self-efficacy

Social cognitive theory asserts that individuals with inefficacious beliefs tend to avoid an activity and are less persistent when facing obstacles, but that individuals with efficacious beliefs are willing to invest more effort and are resilient to challenges and difficulties (Bandura, 1977, 1982). Consistent with this notion, Tierney and Farmer (2002) proposed that CSE is a key motivational driver for engaging in creative behaviors, and research has consistently shown that creativity is strongly related to CSE. For instance, Tierney and Farmer (2004) found that people who felt they had higher creative capacity were evaluated as more creative by their supervisor, and Tierney and Farmer (2011) found that increases in employees' CSE lead to increases in employee creative performance over time. Moreover, the meta-analysis by Liu et al. (2016) showed that CSE consistently predicts creative performance across studies, over and above effects of intrinsic and prosocial motivation. We therefore hypothesize:

Hypothesis 2. CSE mediates the three-way interaction among PLB, workload pressure and integrative complexity on creativity. PLB has the strongest positive indirect effect on creativity through CSE when workload pressure and integrative complexity are both high.

3. Method

3.1. Sample and procedure

To test hypotheses, we collected data from employees and their direct supervisors in organizations in the Netherlands and Germany, operating in various sectors, in April/May 2016. Four masters-level students contacted managers/supervisors from their own social network. In total, 81 supervisors were approached for participation in our online survey. After supervisors agreed to participate, we asked them to provide their own work email addresses and those of a maximum of 10 employees directly supervised by them. In total, 484 employees' working email addresses were collected and a survey link was sent to those email addresses. Supervisors were asked to evaluate their employees on creativity, and employees were asked to rate the PLB of their supervisor, their integrative complexity, creativity self-efficacy, and experience of workload pressure. The questionnaires were provided in Dutch, English, and German to increase participation rates. The original English measurement instruments were translated and back-translated following Brislin (1970) procedure.

We were able to match 253 (52% response) employees with their creativity ratings provided by 62 supervisors (77% response). Following the recommendation by Meade and Craig (2012), we excluded one case because the respondent answered "4" to all items, which is likely invalid. The remaining sample consisted of 142 men and 110 women with an average age of 40.97 years (SD = 11.03); 47% of the employees had a bachelor degree or higher. Mean organizational tenure of employees was 11 years (SD = 10.03), and mean dyadic tenure (the length of time an employee had worked with their current supervisor) was 4 years (SD = 5.28). Of the 62 supervisors, 45 were male and 17 were female. Their mean age was 44.95 years (SD = 10.10); 74% of the supervisors had a bachelor degree or higher. The majority of respondents worked in manufacturing (39%), healthcare (30%), and business service (15%) organizations; 33% of the respondents worked in management and 30% in operation and production. Diverse organizational and task backgrounds ensured variation in terms of creativity demands.

3.2. Measures

PLB. PLB was measured with 22 items developed and validated by Zhang et al. (2015). This scale has good convergent and divergent validity, as well as predictive validity on multiple performance criteria (Zhang et al., 2015). Among the 5 dimensions of PLB, the balances between control and autonomy, and between structure and flexibility, are most relevant when creativity is the focal criterion (Lewis, 2000; Smith & Lewis, 2011). Accordingly, we focused on two dimensions, each measured with 4 items: *enforcing work requirements, while allowing flexibility*, and *maintaining decision control, while allowing autonomy*. Employees were asked to rate the degree to which their leader demonstrated paradoxical behaviors on a 7-point Linkert scale (*1 = not at all* to *7 = a lot*). Sample items are [The leader…] "Clarifies work requirements, but does not micro-manage work", and "Makes final decisions for subordinates, but allows subordinates to control specific work processes". Internal consistency of all eight items combined was high (α = 0.85). We also conducted exploratory analysis for separate dimension of PLB (see Appendix A).

Integrative complexity. Integrative complexity of employees was measured using the scale developed by Zhang et al. (2015). The differentiation dimension (5 items) captures the extent to which individuals have differentiated views toward an issue. Sample items were: "I understand how there can always be divergent viewpoint on certain issues" and "I believe in the value of dissent". The integration dimension (6 items) indicates the degree to which individuals believe that conflicting forces can be integrated and synergized. Sample items included "When there are different perspectives on an issue, I often point out the common areas of overlap that may serve to bridge these differences" and "I believe that trade-offs can be avoided when making a decision". We used a 7-point Likert scale (*1 = strongly disagree* to *7 = strongly agree*). Following Zhang et al. (2015), we averaged all items to form a measure of integrative complexity (α = 0.79).

Workload pressure. Following Bakker et al. (2004) and Molino, Cortese, Bakker, and Ghislieri (2015), workload pressure was measured with 4 items on a 7-point Likert scale (*1 = never* to *7 = always*). Sample items are "How often do you have to work extra hard in order to reach a deadline?" and "Do you have too much work to do?". The items were averaged to measure workload pressure (α = 0.88).

Because we assume that workload pressure is associated with the experience of tension, we tested this assumption in a separate Dutch sample of 76 employees. We collected this additional data using a similar sampling strategy as the main study. The experience of tension was measured with the 7-item scale developed by Miron-Spektor et al. (2018). Sample items include "I often need to decide between opposing alternatives" and "My work is filled with tensions and contradictions" (α = 0.87). The results showed that the correlation between workload pressure and tension experience was positive and significant (r = 0.38, p = .001). Further, to show that workload pressure can predict tension experience beyond resource scarcity, we adopted 3 items from Miron-Spektor et al. (2018) such as "Generally, I can get the resources I need for my work" (R) and "I have adequate resources for performing my tasks" (R) (α = 0.81). Regression results showed that workload pressure remained a positive predictor of the experience of tension (β = 0.38, p = .001) while controlling for resource scarcity. Consistent with our assumptions, these results show that workload pressure can be a source of tension at work.

Creative self-efficacy. CSE was measured with the four-item scale used by Gong et al. (2009), which was adapted from the original three items developed by Tierney and Farmer (2002). We preferred the four-item scale over the original three-item scale to improve internal consistency. The items were rated on a 7-point scale (*1 = strongly disagree* to *7 = strongly agree*). Sample items were: "I feel that I'm good at generating novel ideas" and "I have confidence in my ability to solve problems creatively" (α = 0.82).

Creativity. In keeping with research using supervisor ratings of creativity (e.g., Baer & Oldham, 2006; Huang, Krasikova, & Liu, 2016; Zhou & George, 2001), leaders were asked to rate employees' creative performance on a 7-item scale developed by Sacramento, Fay, and West (2013) (*1 = strongly disagree* to *7 = strongly agree*). This scale was based on Tierney, Farmer, and Graen (1999) and Zhou and George (2001). Sample items were: [At work, this person….] "Demonstrated originality in his/her work" and "Suggested feasible ideas for the project/work activities" (α = 0.94).

Control variables. Following the recommendations for the use of theoretically potent control variables (Bernerth & Aguinis, 2016; Carlson & Wu, 2012), we considered several relevant control variables including education (7 = PhD, 6 = master, 5 = bachelor, 4 = practical degree, 3 = high school/technical school diploma, 2 = middle school, 1 = no school or primary school), dyadic tenure (in years), creative job requirement, leader support, and job autonomy. Education level is associated with cognitive development in terms of the use of complicated schemas, diverse experiences and knowledge, which enable individuals to feel confident to solve problems creatively and demonstrate creativity at work (Tierney & Farmer, 2002). Tenure with supervisor may affect subordinates' perception of leadership and supervisor ratings of performance (Duarte, Goodson, & Klich, 1994; Wayne, Shore, & Linden, 1997).

Because we sampled from a variety of job positions and

organizations, we controlled for perceived creative job requirements, measured on a 5-item scale (*1 = not at all to 7 = completely*) adopted from Unsworth, Wall, and Carter (2005). A sample item was "My job requires me to have ideas about changing ways of organizing work" ($\alpha = 0.86$). Employees with higher creative requirements are more likely to think and behave in creative ways (Unsworth & Clegg, 2010). We also controlled for job autonomy because it is an important determinant of intrinsic motivation (e.g., Shalley, Zhou, & Oldham, 2004), and because the employees in our sample were diverse in terms of job title and autonomy. Job autonomy was measured on a 7-point scale with 3 items adopted from (Spreitzer, 1995). One sample item was "I have considerable opportunity for independence and freedom in how I do my job" ($\alpha = 0.91$). To account for the influence of other leader behaviors on CSE and creativity, we controlled for leader support, measured with 3 items on a 7-point scale developed by Amabile et al. (2004). A sample item was "To what extent is there a positive interaction between you and your supervisor?" ($\alpha = 0.84$). According to Amabile and colleagues, various leader behaviors influence subordinate perceptions of leader support which, in turn, influence creativity. Moreover, supervisor support may affect the formation of CSE (Tierney & Farmer, 2002). In addition, we also included conventionally-controlled variables such as age, gender, organizational tenure in our survey, but including these variables did not change our results.

4. Results

4.1. Descriptive statistics and preliminary results

Descriptive statistics, correlations and scale reliabilities are shown in Table 1. PLB was not correlated with creative self-efficacy ($r = 0.05$, *ns*) and positively with creativity ($r = 0.13$, $p < .05$). CSE was positively correlated with creativity ($r = 0.28$, $p < .001$). In terms of control variables, education level, dyadic tenure, creative job requirement, leader support, and job autonomy were significantly correlated with at least one of our variables of interest; we thus controlled for these variables (Becker, 2005).

Confirmatory factor analyses were conducted to examine the discriminant validity of our four employee self-reported measures using Rosseel (2012) lavaan R package. The hypothesized model with the four constructs indicated by their respective items showed a reasonable fit (χ^2 (318) = 626.93, $p < .001$; CFI = 0.88, TLI = 0.87, RMSEA = 0.06, SRMR = 0.07). The hypothesized model showed better model fit than a model in which PLB and integrative complexity were combined ($\Delta\chi^2(3) = 674.06$, $p < .001$) or a model in which creative self-efficacy and integrative complexity were combined ($\Delta\chi^2(3) = 351.87$, $p < .001$). The hypothesized model also fit better than the one factor model in which all items were modeled on one factor ($\Delta\chi^2(6) = 1458.90$, $p < .001$).

Because employees were nested within supervisors, we tested whether CSE and creativity ratings varied between supervisors. The analysis showed that the variance of CSE at the group level was relatively small (ICC (1) = 0.05, *ns*). However, the variance of creativity at the group level was significant (ICC (1) = 0.23, $p < .001$). Therefore, to account for group level influence, we used multilevel modelling, with random intercepts for supervisors. Prior to analysis, to facilitate interpretation of results, all variables except the dependent variables (CSE for Hypothesis 1 and Creativity for Hypothesis 2) were grand mean-centered to avoid multicollinearity (Cohen, Cohen, West, & Aiken, 2003). We tested all hypotheses using Mplus with maximum likelihood estimation (Muthén & Muthén, 2012). We also checked the robustness of the results with alternative estimation methods.[1] There were five missing values on dyadic tenure and two on education, and the multiple imputation method (Asparouhov & Muthén, 2010) was used to replace these missing values.

4.2. Test of hypotheses

The results regarding Hypothesis 1 are shown in Table 2. Hypothesis 1 predicted that PLB, workload pressure, and integrative complexity interactively affect CSE such that PLB would have the strongest positive effect on CSE when workload pressure and integrative complexity are both high. The results indicated that the three-way interaction between PLB, integrative complexity and workload pressure on CSE was significant ($B = 0.25$, $SE = 0.10$, $p < .05$). As shown in Fig. 2 and Table 3, only when integrative complexity and workload pressure were both high, PLB had a significant, positive effect on CSE ($B = 0.23$, $SE = 0.09$, $p < .05$). In contrast, the effect of PLB on CSE was negative for other combinations of integrative complexity and workload pressure. Particularly, the effect was significantly negative when workload pressure was high while integrative complexity was low ($B = -0.37$, $SE = 0.13$, $p < .01$). Consistent with the idea that PLB is less relevant when workload pressure is low, effects of PLB were not significant when workload pressure was low. Taken together, Hypothesis 1 was supported.

To look at the three-way interaction in a different way, we also examined the simple slopes of workload pressure under different combinations of PLB and integrative complexity. The results showed that workload pressure had a significant positive effect on CSE only when PLB and integrative complexity were both high ($B = 0.19$, $SE = 0.10$, $p < .05$). The effect of workload pressure on CSE was non-significant when PLB and integrative complexity were both low ($B = 0.06$, $SE = 0.07$, *ns*), when PLB was high and integrative complexity was low ($B = -0.05$, $SE = 0.11$, *ns*), or when PLB was low while integrative complexity was high ($B = -0.19$, $SE = 0.11$, $p < .10$). These complementary results suggest that, consistent with paradox theory, difficult situations may even stimulate learning: workload pressure had positive effects on CSE, but only for employees with high integrative complexity who can learn from the paradoxical behaviors of their leaders.

Hypothesis 2 predicted that CSE mediates the conditional effect of PLB on employee creativity such that PLB has the strongest positive, indirect effect when workload pressure and integrative complexity are both high. The results of multilevel modelling are shown in Table 4. As anticipated, CSE remained a significant, positive predictor of creativity after accounting for control variables and PLB ($B = 0.29$, $SE = 0.09$, $p < .01$). The conditional indirect effect analysis using the Monte Carlo bootstrapping method (Preacher & Selig, 2012) showed that PLB had a positive, significant indirect effect on creativity only when workload pressure and integrative complexity were both high ($B = 0.07$, $SE = 0.03$, $p < .05$, 95% CI [0.01, 0.14]), but a negative, significant indirect effect when workload pressure was high while integrative complexity was low ($B = -0.10$, SE = 0.05, $p < .05$, 95% CI [−0.22, −0.02]). The indirect effect of PLB on creativity was negative, but not

[1] To check the robustness of the results, we analyzed the data with alternative estimation methods (Bayesian estimation and MLR) available in Mplus. The three-way interaction effect was consistently significant across different methods. With regard to Hypothesis 2, Bayesian estimation (with informative prior about the relationship between CSE and creativity based on the meta-analysis by Liu et al. (2016), or with non-informative prior) produced comparable results as ML. MLR estimation differed slightly, and showed a positive, but non-significant conditional indirect effect when workload pressure and integrative complexity were both high (1SD above the means). This might be due to the fact that MLR is more susceptible to the influence of influential data points, obtaining larger standard errors. Because Bayesian statistics are robust to the presence of influential data points (Aguinis, Gottfredson, & Joo, 2013), we believe our results are robust. All other effects were comparable across different analyses.

Table 1
Descriptive statistics and correlations.

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender[a]	0.56	0.50													
2. Age[b]	40.97	11.03	0.04												
3. Education level[c]	4.51	1.21	0.06	−0.18**											
4. Organizational tenure[b]	11.52	10.03	0.07	0.61***	−0.13*										
5. Dyadic tenure[b]	4.27	5.28	−0.05	0.23***	−0.24***	0.35***									
6. Creative job requirement	4.90	1.10	0.01	−0.04	−0.07	0.07	0.07	(0.86)							
7. Leader support	5.34	1.18	−0.15*	−0.05	0.05	−0.04	−0.04	0.27**	(0.84)						
8. Job autonomy	5.27	1.20	0.19**	0.02	0.01	0.01	−0.09	0.28**	0.23**	(0.91)					
9. Workload pressure	4.83	1.07	−0.07	−0.01	−0.05	−0.06	−0.05	0.25***	0.04	0.13*	(0.88)				
10. PLB	5.22	0.86	−0.07	−0.08	−0.00	−0.03	−0.04	0.18**	0.59***	0.15*	0.01	(0.85)			
11. Integrative complexity	5.19	0.58	−0.17**	−0.03	0.05	−0.08	−0.05	0.29***	0.18**	0.17**	0.27***	0.16*	(0.79)		
12. Creative self-efficacy	5.30	0.85	0.02	−0.09	0.08	−0.10	−0.13*	0.26***	0.11†	0.20**	0.17**	0.05	0.29***	(0.84)	
13. Creativity	4.86	1.20	−0.07	−0.23***	0.20**	−0.14*	−0.12+	0.20**	0.20**	0.20**	0.09	0.13*	0.12+	0.28**	(0.95)

Notes. $N = 252$. Cronbach's Alphas are in parentheses on the diagonal. [a]0 = female, 1 = male. [b]Age, organizational tenure and dyadic tenure were measured in years. [c]Education level was coded as: 7 = PhD, 6 = master, 5 = bachelor, 4 = practical degree, 3 = high school/technical school diploma, 2 = middle school, 1 = no school or primary school.
† $p < .10$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 2
Multilevel modeling results for Hypothesis 1.

Predictors	Creative self-efficacy			
	Model 1	Model 2	Model 3	Model 4
Control variables				
Education level	0.05(0.05)	0.04(0.04)	0.05(0.04)	0.05(0.04)
Creative job requirement	0.18***(0.05)	0.14**(0.05)	0.15**(0.05)	0.16**(0.05)
Dyadic tenure	−0.02†(0.01)	−0.02†(0.01)	−0.02†(0.01)	−0.02*(0.01)
Leader support	0.01(0.05)	0.02(0.05)	0.03(0.05)	0.03(0.05)
Job autonomy	0.08† (0.05)	0.07(0.05)	0.05(0.05)	0.05(0.04)
Predictors				
PLB		−0.05(0.07)	−0.12(0.07)	−0.15*(0.07)
Integrative Complexity (IC)		0.29**(0.09)	0.38***(0.09)	0.36***(0.09)
Workload Pressure (WL)		0.04(0.05)	0.03(0.05)	0.00(0.05)
Interaction terms				
PLB * WL			0.07(0.06)	0.08(0.06)
PLB * IC			0.33**(0.10)	0.26*(0.11)
WL * IC			−0.05(0.07)	−0.00(0.07)
PLB * WL * IC				0.25*(0.10)
Within-Level Residual	0.61***	0.58***	0.54***	0.52***
Pseudo-R^2	0.11	0.15	0.19	0.22
ΔR^2		0.04	0.08	0.11

Notes. $N = 252$. Standard errors are in parentheses. ΔR^2 refers to change in *Pseudo-R^2* when adding the hypothesis-relevant variables compared to the control model.
† $p < .10$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

significant when integrative complexity and workload pressure were both low, and when integrative complexity was high and workload pressure was low. These results thus support Hypothesis 2.

5. Discussion and conclusion

Integrating social cognitive theory and paradox theory, we addressed the issue of fostering employees' creative self-efficacy (CSE) and creativity in high workload pressure situations, focusing in particular on the role of paradoxical leader behavior (PLB). Based on paradox theory, we suggested that PLB can be an external resource for employees to learn to embrace tensions rendered salient by workload pressure, enhancing CSE and creativity. However, we also suggested that employees who have the integrative complexity to effectively understand and act upon complex, dynamic leader behavior would benefit more from PLB than employees with low integrative complexity. The findings from a multi-source survey support the thesis that PLB is effective in promoting CSE and creativity under high workload pressure, especially for employees with high integrative complexity. When integrative complexity was low, however, PLB had a negative effect on CSE and creativity, and this negative effect was strongest when workload pressure was high but integrative complexity was low.

5.1. Theoretical implications

These results have implications for several streams of research. First, this paper complements existing understanding of how leaders can promote employee CSE and creativity in stressful circumstances. Previous research has suggested that leadership (e.g., transformational/charismatic leadership) plays an important role in CSE and creativity (Gong et al., 2009; Van Knippenberg & Sitkin, 2013), and that leadership can buffer negative effects of work stress/demands on employees outcomes such as well-being, engagement, and OCB (e.g., Babcock-Roberson & Strickland, 2010; Syrek, Apostel, & Antoni, 2013). However, few studies have investigated factors that promote CSE and creativity even under stressful circumstances. Similarly, although research has suggested that the effects of empowering leadership on follower performance depend on situational factors such as follower stress, it predicts an attenuating (not an augmenting) effect of follower stress on the relationship between empowering leadership and follower performance (e.g., Sharma & Kirkman, 2015). Our study found that PLB was effective at promoting CSE and creativity especially for employees who experienced high workload pressure and had high integrative complexity. However, PLB was ineffective when workload pressure was

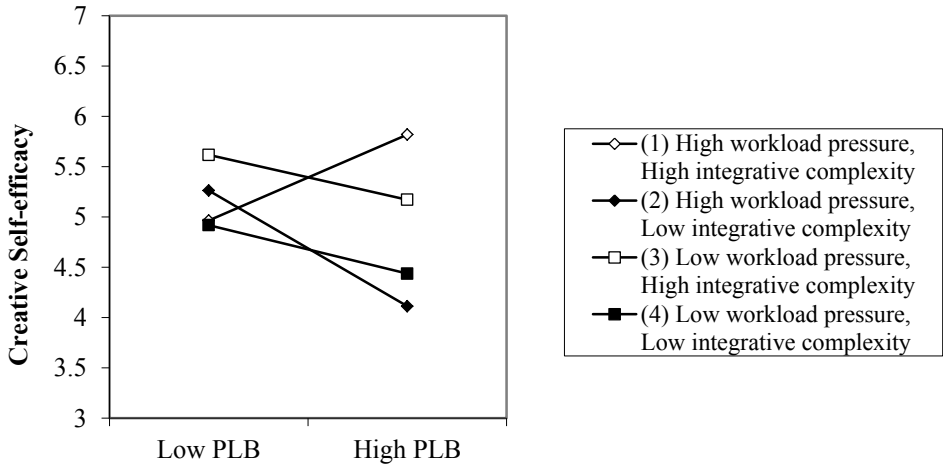

Fig. 2. Three-way interaction among PLB, integrative complexity and workload pressure on creative self-efficacy.

Table 3
Conditional effects of PLB on creative self-efficacy.

Pairs of comparison	Slope	*t*
1(High WL, high IC)	0.23(0.09)	2.47*
2(Low WL, low IC)	−0.23(0.13)	−1.76†
3(Low WL, high IC)	−0.24(0.16)	−1.55
4(High WL, low IC)	−0.37(0.13)	−2.83**
Slope difference		
1 and 2	0.47(0.15)	3.01**
1 and 3	0.49(0.18)	2.57*
1 and 4	0.60(0.15)	4.13***
2 and 3	0.01(0.19)	0.06
2 and 4	0.14(0.17)	0.80
3 and 4	0.13(0.20)	0.63

Notes. $N = 252$. Standard errors are in parentheses. We computed the simple slopes with the values of the moderator(s) at one standard deviation above and below the mean.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 4
Multilevel modeling results for the moderated mediation model.

Predictors	Dependent variable	
	Creative self-efficacy	Creativity
Control variables		
Education level	0.05(0.04)	0.17** (0.06)
Creative job requirement	0.16**(0.05)	0.14*(0.07)
Dyadic tenure	−0.02*(0.01)	−0.02(0.01)
Leader support	0.03(0.05)	0.08(0.07)
Job autonomy	0.05(0.04)	0.09(0.06)
Predictors		
PLB	−0.15* (0.07)	−0.03(0.10)
Workload Pressure (WL)	0.00(0.05)	
Integrative Complexity (IC)	0.36***(0.09)	
Interaction terms		
PLB * WL	0.08(0.06)	
PLB * IC	0.25*(0.11)	
WL * IC	−0.00(0.07)	
PLB * WL * IC	0.24*(0.10)	
Mediator		
Creative self-efficacy (CSE)		0.29**(0.09)
Conditional indirect effects of PLB on creativity through CSE		
	Effect	95% confidence interval
1(High WL, high IC)	0.07*(0.03)	[0.01, 0.14]
2(Low WL, low IC)	−0.07(0.04)	[−0.17, 0.01]
3(Low WL, high IC)	−0.07(0.05)	[−0.18, 0.02]
4(High WL, low IC)	−0.10*(0.05)	[−0.22, −0.02]

Notes. $N = 252$. Standard errors are in parentheses. [a]Confidence interval for the indirect effect was constructed with the Monte Carlo method (20,000 repetitions). We computed the conditional indirect effect with the values of the moderator(s) at one standard deviation above and below the mean.
†$p < .10$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

low, and even negatively affected CSE and creativity when employee integrative complexity was low and workload pressure high. As such, our study provides insights into how leaders can enhance creativity in high workload pressure situations.

More broadly speaking, our research further clarifies the relationship between workload pressure and creativity, contributing to the interactional perspective of creativity (Woodman, Sawyer, & Griffin, 1993; Zhou & Hoever, 2014). Empirical research on workload and time pressure and creativity has yielded inconsistent findings, with some studies suggesting a negative relationship (e.g., Andrews & Smith, 1996), while others showing nonlinear (Baer & Oldham, 2006) or even positive relationships (Mehta & Zhu, 2016). Workload pressure thus belongs to the "configurational" type of factors that are hard to classify as beneficial or harmful, but that "specifically promote or hinder creativity in particular configurations with other factors" (Zhou & Hoever, 2014; p. 352). Adopting a paradox perspective, we focused on the configurational effects of workload pressure, PLB, and employee integrative complexity, and found that when PLB and integrative complexity were both high, workload pressure promoted creativity. We did not observe a similar positive effect under other combinations of PLB and integrative complexity. Our research thus demonstrates that consistency between the presence of PLB and employee integrative complexity is important for fostering creativity under high workload pressure.

Second, our linking of PLB to CSE and creativity extends the growing body of research that applies a paradox lens to creativity. Most existing studies in this research stream have investigated how individuals handle tensions in creativity by, for example, adopting a

paradoxical mindset or having multiple motivations (Miron-Spektor & Beenen, 2015; Miron-Spektor et al., 2011). Little attention has, however, been paid to the external resources that individuals need to cope with manifest paradoxical tensions. Addressing this issue, our work simultaneously considered leader behavior, follower characteristics, and situational factors, and showed that they exert interactive effects on CSE and creativity. Our results suggest that by showing opposing yet interrelated behaviors, paradoxical leaders help build employee CSE which allows them to more effectively handle salient tensions (Zhang et al., 2015), but only for employees with high integrative complexity. Our research is among the first studies, if not the first one, to bridge paradox leadership research and creativity research.

Third, following paradox theory, we outlined two important boundary conditions (integrative complexity and workload pressure) of the effectiveness of PLB for CSE and creativity. This emphasis on the role of personal (integrative complexity) and contextual (workload pressure) contingencies of PLB departs from the current literature on paradox, which tends to neglect individual differences and the organizational context (Schad et al., 2016). The present work suggests that research in paradoxical leadership should investigate *when* and *for whom* PLB might be a good or bad for performance. For instance, we found that PLB hampered CSE when individuals do not have the integrative complexity to accept and embrace PLB, and for those individuals, paradoxical leaders may even be seen as stressful, uncomfortable and confusing. This is consistent with Zhang et al. (2015) suggestion that employees' receptiveness to paradoxes needs to be taken into account when leaders perform complex, seemingly inconsistent behavior. Moreover, this study also speaks to Miron-Spektor et al. (2018) work on the microfoundations of organizational paradox, which underscores the importance of a paradox mindset in responding to salient tensions triggered by resource scarcity. The current research suggests that PLB can be a double-edged sword, bearing the potential to promote employee creativity only under certain circumstances.

This study also has implications for research on ambidextrous leadership for innovation. Inspired by research on organizational ambidexterity (O'Reilly & Tushman, 2013; Tushman & O'Reilly, 1996), ambidextrous leadership was conceptualized as "the ability to foster both explorative and exploitative behaviors in followers by increasing or reducing variance in their behavior and flexibly switching between those behaviors" (Rosing et al., 2011, p: 957). According to this theory, the innovation process is complex and nonlinear, and requires ambidexterity from individuals/teams to flexibly switch between exploration and exploitation activities. To support this requirement of ambidexterity, leaders should show both opening behaviors that encourage experimentation, and closing behaviors that focus on monitoring (Rosing et al., 2011; Zacher et al., 2014). Our study aligns with the idea of ambidextrous leadership, in that leaders need to show seemingly contradictory, complex behaviors to facilitate performance that involves conflicting demands. However, our study raised an important question that has been overlooked in the ambidextrous leadership literature: when and for whom this contradictory and complex behavior might bring benefit. Given that ambidextrous leadership is also complex and involves inconsistency, it is possible that the performance of employees with low integrative complexity, instead of being motivated or supported, is hampered if leaders perform both opening and closing behaviors. Future research on the effects of ambidextrous leadership on innovation should consider when and for whom the effects apply.

Moreover, this study underscores CSE as a motivational mediator between PLB and employee creativity. Existing research has suggested that supervisory modelling and persuasive behaviors related to creativity play a key role in determining employee CSE (Gist & Mitchell, 1992; Gong et al., 2009; Tierney & Farmer, 2002). We provide an alternative perspective on how leaders facilitate the development of employee CSE, suggesting that leaders' role modelling behavior may not necessarily involve the demonstration of specific creative skills or creative performance. Leaders can also inspire employees to constructively deal with tensions in achieving creativity (Miron-Spektor & Erez, 2017). Similarly, leaders can support creativity by constructing a conjoint structured and autonomous environment that allows individuals to manage the challenges (paradoxical tensions) in creativity. Taken together, our study suggests that viewing paradoxical tensions as a central challenge in creativity provides insights into the conditions that help constructively manage those challenges, which in turn enhances employee CSE and creativity.

Finally, to our knowledge, our study is among the first to test the effects of PLB in a Western context. The concept of PLB is based on Chinese yin-yang philosophy (Zhang et al., 2015), which emphasizes a "both/and" approach to contradictory demands. Because this approach differs from the long-standing, Western "if/then" approach of contingency theory (Lawrence & Lorsch, 1967), empirically examining the effectiveness of PLB in a Western context is crucial (Zhang et al., 2015). The results of the present study suggest that PLB is also relevant in a Western (European) context. We encourage future research to test the PLB-creativity link in other contexts. For instance, it would be interesting to test the relationship in Eastern Europe, which has a history of communism, resulting in different cultural norms and values compared to Western Europe (Steenkamp, 2001).

5.2. Practical implications

Our study provides empirical evidence that PLB, particularly behavior that combines control and autonomy, and constraints and flexibility, can enhance employee CSE and creativity in high workload pressure situations. Although different authors have suggested that paradoxical leadership may benefit innovation and creativity (Lewis & Smith, 2014; Lewis et al., 2014; Rosing et al., 2011; Schad et al., 2016), empirical support for this idea is scarce. Although research has shown that leaders are able to combine contradictory behaviors (Zacher & Rosing, 2015; Zhang et al., 2015), and contradictory personal traits (e.g., leader narcissism and humility, Owens, Wallace, & Waldman, 2015) to promote follower performance, none of this research has directly focused on creativity. More importantly, few studies have investigated how leaders can enhance employees CSE and creativity under stressful circumstances. Our research suggests that when faced with high workload pressure and intensified tensions, PLB helps sustain CSE and creativity. However, managers need to be mindful that performing PLB will not guarantee creativity among all employees. We found that PLB promoted CSE and creativity only when workload pressure was high and when employees had sufficient integrative complexity. Therefore, leaders need to be aware of the situational configurations when performing PLB. It is important to note that integrative complexity can be developed and trained by, for example, exposure to other cultures (Suedfeld & Bluck, 1993; Tadmor, Galinsky, & Maddux, 2012) and occupation of different social roles (Hannah et al., 2013). When subordinates have low integrative complexity, it is a good idea for managers to develop employees' integrative complexity before showing complex leader behaviors such as PLB.

Moreover, managers can also promote CSE by focusing on managing tensions at work. First, managers may convince their subordinates that contradictory and conflicting goals and processes occurring in creativity can be combined and integrated. Managers may coach their employees to accept paradoxical goals and behave paradoxically. Further, managers can build a work environment that is both autonomous and bounded so that employees have both directions and

autonomy to engage in creative behavior, enhancing employee CSE and creativity. Moreover, by role modeling and building a supportive environment for managing tensions, leaders can help alleviate fear and stress among employees when encountering paradoxical tensions in creativity. Our study suggests that developing CSE is not necessarily only about fostering creative skills, it is also about managing the paradoxical challenges in creativity.

5.3. Limitations and future research directions

Although we collected data from different sources, our cross-sectional survey data cannot rule out the possibility of reverse causality. For example, the possibility that more creative employees actually cause leaders to behave more paradoxically cannot be excluded. Despite this limitation, our field data provide evidence for the external validity of the conceptual model. Future research should investigate the internal validity of our model by manipulating PLB in a controlled laboratory setting or by applying longitudinal designs. Relatedly, although the three-way interaction effect was tested based on data from a single report, common method variance is unlikely to inflate the observed three-way interaction effect (Podsakoff, MacKenzie, & Podsakoff, 2012; Siemsen, Roth, & Oliveira, 2010). Instead, Siemsen et al. (2010) suggested that detecting significant interaction effects despite the presence of potential common method variance should be regarded as strong evidence of the existence of the proposed interaction effect.

We measured employee creativity using leader subjective ratings instead of objective criteria. Considering that we were interested in understanding "small c" creativity that is performed by individuals in their daily activities, and that objective products are not necessary the ultimate goal of those creative behaviors, supervisor ratings tend to be very useful to assess creative behaviors at work. Indeed, research has suggested that both subjective and objective measures have advantages, depending on the context (Elsbach, Kramer, & Elsbach, 2012). Nevertheless, supervisor ratings of creativity are subjective and may be influenced by other factors in addition to employees' creative achievements. We therefore encourage future research to measure creativity with objective data as well.

Although we used leader support to control for the influences of other leadership styles and job autonomy as a proxy of intrinsic motivation, we acknowledge that it is a limitation that we did not measure different leadership styles (e.g., transformational leadership, empowering leadership, and servant leadership) and intrinsic motivation directly in this study. However, existing research has demonstrated the unique predictive validity of both PLB (Zhang et al., 2015) and CSE (Liu et al., 2016), suggesting that the current results may hold over and above the effects of other leadership styles and intrinsic motivation. Nevertheless, we encourage future research to directly examine the effects of PLB on CSE and creativity, while simultaneously controlling for other leadership styles and intrinsic motivation.

We suggested that PLB helps employees manage tensions between day-to-day activities and creative actions, and between contradictory demands within creative processes. However, we did not explicitly test whether PLB helps employees achieve an optimal balance between different activities or demands. Although our overall creativity measure allowed us to examine the consequences of PLB on supervisor ratings of integral employee creativity, future research could further advance our understanding of creativity by testing the effects of PLB on specific behaviors or outcomes that are relevant for creativity. We also argued that high workload pressure intensifies the experience of tensions, and this assumption was supported in a separate pilot study. However, experienced tensions were not measured per se in our main study, and consequently we cannot be sure that workload pressure had the moderating effect that we observed because it intensified paradoxical tensions. Similarly, we assumed, but did not specifically examine, that experienced tensions may increase anxiety among employees with low integrative complexity. The direct assessment of anxiety would present an opportunity to further test paradox theory.

We identified employees' cognitive characteristics as a relevant boundary condition, but additional moderators are possible. For instance, future research could explore the moderating role of leader-member exchange (LMX; Dansereau, Graen, & Haga, 1975) in the PLB-creativity link. Employees with high LMX may respond more positively to PLB because they have more trust in the leader than employees with low LMX (Scandura & Graen, 1984). Moreover, mediators other than CSE might be relevant as well. For example, PLB may relate to employee creativity by enhancing explorative and explorative behavior among employees (Rosing et al., 2011), and future work may thus explore alternative mediators and moderators of the PLB-employee creativity link.

Future research on CSE and creativity might benefit from considering other personal and contextual factors that are relevant for handling paradoxical tensions. For instance, at the individual level, paradox mindset, which refers to "the extent to which one is accepting of and energized by tensions" (Miron-Spektor et al., 2018, p. 26) would be associated with positive psychological states when faced with tensions at work. In turn, social cognitive theory (Bandura, 1977) suggests that these positive psychological states may drive the formation of CSE. Similarly, at the dyadic level, leaders' expression of emotion complexity—"the simultaneous or sequential experience of at least two different emotional states during the same emotional episode" (Rothman & Melwani, 2017, p. 259)—may also enhance CSE and creativity by signaling to employees that the situation invites creative responses to tensions and contradictions (Rothman & Melwani, 2017). This could offer the opportunity to make use of creativity-related cognitive or emotional processes, thereby enhancing CSE and creativity (Tierney & Farmer, 2002).

5.4. Conclusion

Today's increasingly dynamic, fast-paced and rapidly changing business environment requires a leadership approach that maximizes employee creativity. However, fostering creativity under stressful circumstances is challenging. According to the paradox perspective, the journey to creativity is full of tensions among goals, processes and perspectives, which can be either seeds of creativity and innovation, or sources of confusion and defensiveness. High workload pressure intensifies employees' experience of tensions, compelling individuals to initiate responses. To help employees deal with experienced tensions constructively, an effective leadership approach is to strengthen employees' creative self-efficacy by being a role model, showing employees that it is possible to behave paradoxically and thereby address tensions at work. However, this leadership approach is only effective when employees have the integrative complexity to understand and embrace paradoxes and tensions.

Conflict of interest

The authors declare no conflict of interest.

Appendix A. Multilevel regression results of each dimension of PLB

Variable	Model1[a]		Model2[a]		Model3[a]		Model4[a]		Model5[a]	
	CSE	Creativity	CSE	Creativity	CSE	Creativity	CSE	Creativity	CSE	Creativity
Education	0.04(0.04)	0.17**(0.06)	0.04(0.04)	0.17**(0.06)	0.05(0.04)	0.17**(0.06)	0.05(0.04)	0.17**(0.06)	0.03(0.04)	0.17**(0.06)
Creative job requirement	0.15**(0.05)	0.14*(0.07)	0.15**(0.05)	0.14*(0.07)	0.15**(0.05)	0.14*(0.07)	0.15**(0.05)	0.14*(0.07)	0.14**(0.05)	0.14*(0.07)
Dyadic tenure	−0.02*(0.01)	−0.02(0.01)	−0.02(0.01)	−0.02(0.01)	−0.02†(0.01)	−0.02(0.01)	−0.02**(0.01)	−0.02(0.01)	−0.02*(0.01)	−0.02(0.01)
Leader support	−0.02(0.06)	0.08(0.08)	−0.04(0.05)	0.07(0.07)	0.03(0.05)	0.09(0.07)	0.01(0.05)	0.06(0.07)	−0.04(0.05)	0.06(0.06)
Job autonomy	0.06(0.05)	0.09(0.06)	0.07(0.05)	0.09(0.06)	0.06(0.04)	0.09(0.06)	0.04(0.04)	0.09(0.06)	0.06(0.04)	0.09(0.06)
PLB dimension	−0.00(0.06)	−0.03(0.09)	0.09(0.06)	−0.01(0.08)	−0.09(0.06)	−0.05(0.08)	−0.12†(0.06)	0.01(0.08)	0.07(0.05)	0.02(0.06)
Workload (WL)	0.02(0.05)		0.03(0.05)		0.02(0.05)		−0.01(0.05)		0.02(0.05)	
Integrative complexity (IC)	0.36***(0.09)		0.27**(0.10)		0.35***(0.09)		0.33***(0.09)		0.29**(0.09)	
PLB * WL	0.04(0.04)		0.08(0.06)		0.05(0.05)		0.05(0.06)		0.06(0.05)	
PLB * IC	0.18*(0.08)		0.06(0.10)		0.21*(0.08)		0.24*(0.11)		0.15† (0.08)	
WL * IC	0.00(0.08)		−0.04(0.07)		−0.00(0.07)		0.01(0.08)		−0.05(0.07)	
PLB * WL * IC	0.10(0.07)		0.08(0.08)		0.12(0.08)		0.28**(0.09)		0.10(0.07)	
Creative self-efficacy (CSE)		0.29**(0.08)		0.29**(0.09)		0.28**(0.09)		0.29**(0.08)		0.28**(0.09)

Notes. $N = 252$. Standard errors are in parentheses. [a]Model 1, Model 2, Model 3, Model 4 and Model 5 show the results with the dimension "Treating subordinates uniformly while allowing individualization", "Combining self-centeredness with other-centeredness", "Maintaining decision control while allowing autonomy", "Enforcing work requirements, while allowing flexibility", and "Maintaining both distance and closeness" as the predictor, respectively.

† $p < .10$
* $p < .05$
** $p < .01$
*** $p < .001$

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