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Roy Y. J. CHUA

*Singapore Management University, royyjchua@smu.edu.sg*

Jia Hui LIM

*Hong Kong Baptist University*

Wannwiruch (Fon) WIRUCHNIPAWAN

*CP Leadership Institute*

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#### Citation

CHUA, Roy Y. J.; LIM, Jia Hui; and WIRUCHNIPAWAN, Wannwiruch (Fon). Unlocking the creativity potential of dialectical thinking: Field investigations of the comparative effects of transformational and transactional leadership styles. (2021). *Journal of Management*. 1-16.

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# Unlocking the Creativity Potential of Dialectical Thinking: Field Investigations of the Comparative Effects of Transformational and Transactional Leadership Styles

Roy Y. J. Chua, Jia Hui Lim, Wannawiruch (Fon) Wiruchnipawan

## ABSTRACT

In a digital economy characterized by high volumes of information and ideas, many of which could be contradictory to one another, employees high in dialectical thinking should be well poised to connect disparate ideas to generate creative solutions for business problems. Yet, it is unclear whether dialectical thinking as a creativity-relevant skill can be realized in naturalistic workplace settings, given past mixed findings and the lack of field studies. We propose that supervisors' leadership styles are important moderators that can unlock employees' creativity potential in dialectical thinking. Additionally, we compare the activating effect of transformational leadership and the inhibiting effect of transactional leadership to investigate which leadership style is more impactful in unlocking the power of dialectical thinking on creativity. Through two multisource field studies, we find that dialectical thinking's effect on creativity is context-sensitive, and transactional leadership's inhibiting effect on the dialectical thinking-creativity relationship is stronger than transformational leadership's activating effect. These findings qualify the predominant view that leaders should focus on enacting activators to stimulate employee creativity; rather, avoiding inhibitors might be more effective instead. Practically, our findings suggest that leaders should ensure they engage in fewer transactional leadership behaviors.

*Keywords:* dialectical thinking, creativity, transformational leadership, transactional leadership, leadership comparison.

Creativity—the production of novel and useful ideas (Amabile, 1988, 1996)—is highly valued at the workplace because it enables the invention of new products and services (Shalley & Gilson, 2004), fueling organizational innovation and survival (Amabile, 1996; Nonaka, 1991). However, creativity rarely arises out of thin air but often springs from non-obvious associations among existing ideas (Chua & Iyengar, 2008; Mobley, Doares, & Mumford, 1992). In today's digital business environment where employees are exposed to high volumes of diverse and fast-changing information, the ability to make effective connections among contradictory information and ideas can potentially increase creative performance at work.

Given that creativity stems from connecting disparate, or even contradictory ideas, we examine how dialectical thinking—a cognitive style characterized by a belief in change, interconnectedness, and high tolerance for inconsistencies and contradictions in one's environment (Hideg & Ferris, 2017; Paletz, Bogue, Miron-Spektor, & Spencer-Rodgers, 2018; Peng & Nisbett, 1999; Spencer-Rodgers, Williams, & Peng, 2010)<sup>1</sup>—engenders employee creativity. High dialectical thinkers accept inconsistencies and contradictions in their environment as natural and approach them with a holistic view, compared with low dialectical thinkers who are motivated to avoid them. As

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<sup>1</sup> There exists work that has examined the effects of similar constructs, such as paradoxical frames on creativity (e.g., Leung et al., 2018; Miron-Spektor, Gino, & Argote, 2011). Paradoxical frames refer to mental templates that encourage individuals to recognize and embrace contradictions (Miron-Spektor et al., 2011). It is similar to dialectical thinking in that both are cognitive approaches to manage inconsistencies and contradictions in the environment. They are, however, conceptually distinct from each other. Dialectical thinking is a trait-like cognitive style that characterizes how individuals believe and expect the world to be—that changes and contradictions are ever present and complementary, whereas a paradoxical frame is a cognitive tool that individuals can momentarily make use of to try and manage contradictions in the environment.

such, high dialectical thinkers are more willing to explore rather than suppress inconsistencies and contradictions in their environment (Peng & Nisbett, 1999; Spencer-Rodgers, Williams, et al., 2010) and should thus be more creative than low dialectical thinkers. For instance, employees may learn about both positive and negative views about an existing firm product via social media and tap on dialectical thinking to creatively combine these opposing views to create a better product.

Yet, this creativity potential is often left untapped in the workplace. An important reason could be that even when employees are able to generate creative ideas via dialectical thinking, they may not act on them. Management scholars have highlighted this phenomenon as the gap between “knowing” and “doing” (Dewett, 2006; Pfeffer & Sutton, 2000). We posit that leadership can motivate employees to progress from “knowing” to “doing,” and hence, we examine it as a contextual factor of creative performance in our model. Specifically, while high dialectical thinkers tolerate and synthesize contradictory information sources that engender creativity in their minds (“knowing”), their supervisors’ leadership style provides the motivation required to express and act on these ideas (“doing”).

Although past research suggests that leadership is an overall important contextual factor that influences creative performance, our understanding of the comparative effects of different leadership styles remains limited. Theory and empirical evidence suggest that, in general, transformational leadership has an activating effect, whereas transactional leadership has an inhibiting effect on creativity, thus implying that leaders should engage in the former if creativity is the desired outcome (Anderson, Potocnik, & Zhou, 2014; Jung, 2001; van Knippenberg & Hirst, 2020; Pieterse, van Knippenberg, Schippers, & Stam, 2010)<sup>2</sup> However, we contend that this is a premature conclusion because it is unclear which of the two styles exert a stronger effect on employees’ motivation to actualize their creativity potentials. Knowing which leadership style is more impactful in facilitating creative outcomes is also practically important for leaders who often face time and resources constraints.

Our research makes three key contributions. First, we contribute to the creativity literature by integrating it with literatures on dialectical thinking and leadership styles. We draw on the creative cognition approach (Finke, Ward, & Smith, 1992) and Amabile’s (1996) componential theory of creativity to highlight how leadership bridges the “knowing” and “doing” gap in converting dialectical thinking to actual creative performance at work. We show that the relationship between dialectical thinking and creative performance is highly context-sensitive and whether dialectical thinking’s effect on creativity can be harnessed depends on different leadership styles. Second, the general consensus in the creativity–leadership literature is that high levels of activators such as transformational leadership are beneficial for creative performance (Wang, Oh, Courtright, & Colbert, 2011). We advance this body of work in a novel manner by considering whether avoiding inhibitors such as transactional leadership may be more effective instead. That is, leaders simply should engage in fewer transactional leadership behaviors. We propose competing hypotheses and empirically compare the moderating strengths of an activator (transformational leadership) versus an inhibitor (transactional leadership) on the effect of dialectical thinking on creative performance. Our finding that transactional leadership’s inhibiting influence is stronger than transformational leadership’s activating influence across two field studies suggests that, if the goal is to harness dialectical thinking for creativity, it is more effective for leaders to avoid inhibitors than for them to increase enactment of activators. This insight is also practically important in organizational settings wherein leaders are stretched by many different demands. Third, we contribute to dialectical thinking research by answering calls to examine the dialectical thinking–creativity relationship in a field context (Paletz et al., 2018). As prior research has only been conducted in the laboratory with student samples and inconclusive findings, it is timely to study whether and when the theorized effect of dialectical thinking on creativity holds in field settings. Our finding that dialectical thinking has an inconsistent main effect on creative performance suggests that its effect on creativity is particularly sensitive to context and not as straightforward as current theories propose.

## THEORY AND HYPOTHESES DEVELOPMENT

Dialectical thinking is characterized by the concepts of change (viewing the universe to be in a state of flux and perpetually changing), and contradiction (viewing the universe as comprising of opposing elements where one element can rapidly and abruptly become the opposite and vice versa) (Peng & Nisbett, 1999). It is conceptually rooted in the tradition of holism—viewing the universe as context dependent, interconnected, cyclically changing, and inevitably contradictory (Peng & Nisbett, 1999). High dialectical thinkers are flexible thinkers who are not overly fixated on specific objects or ideas (Nisbett, Peng, Choi, & Norenzayan, 2001) and readily embrace ostensibly

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<sup>2</sup> We focus on these two leadership styles because they represent the most well-studied, overarching categories of leadership styles in both leadership and creativity literatures (Antonakis & House, 2014; Clarke, 2013; Hughes, Lee, Tian, Newman, & Legood, 2018).

incompatible notions (Spencer-Rodgers, Williams, & Peng, 2012). They express inconsistency and ambivalence about their global self-concepts and attitudes (e.g., Boucher, 2011; Choi & Choi, 2002; Spencer-Rodgers, Peng, Wang, & Hou, 2004) and frequently experience complex emotion episodes involving both pleasant and unpleasant feelings (Hui, Fok, & Bond, 2009; Spencer-Rodgers, Peng, & Wang, 2010). When making decisions, high dialectical thinkers experience less surprise when their expectations are contradicted (Choi & Nisbett, 2000) and show more support for policies perceived as procedurally unfair but effective (Hideg & Ferris, 2017). In contrast, low dialectical thinkers anticipate that phenomena remain constant and are uncomfortable with change and contradiction (Peng & Nisbett, 1999). Thus, they are more likely than high dialectical thinkers to discount or ignore contradictions and incompatible information or ideas due to their perceived unnaturalness and undesirability (e.g., Ji, Nisbett, & Su, 2001).

#### THE ROLE OF DIALECTICAL THINKING IN CREATIVITY

The creative cognition approach views creativity as the generation of novel and useful ideas by applying basic cognitive processes to one's knowledge structures (Finke et al., 1992; Ward, 2001). Creative ideas arise from cyclical sequences of generative and exploratory cognitive processes. Generative cognitive processes involve acquiring and assessing ideas, whereas exploratory cognitive processes emphasize mining existing ideas for novel combinations and testing their viability. Albeit distinct, these cognitive processes are complementary in that they intersect at experimenting on existing ideas in search of novel combinations. These processes occur in three distinct stages: acquiring ideas, combining the acquired ideas, and fine-tuning the combined ideas to a specific need (Finke et al., 1992; Ward, 2001). The initial stage of acquiring ideas is crucial as it expands the repertoire from which people draw ideas for subsequent stages. As ideas may arise from diverse sources that are contradictory and fluid, especially in today's digital environment, one's ability to tolerate and manage changing and contradictory ideas would be valuable in the creative process.

This particular ability also represents a form of creativity-relevant skill that is crucial in the creative process. Creativity-relevant skills, as described in Amabile's componential model of creativity (1996), include cognitive styles and personality characteristics that are conducive for novel thinking (Amabile, 2013). While cognitive processes include the ability to flexibly use categories to synthesize information and break out of perceptual and performance "scripts," personality processes include a tolerance for ambiguity and self-discipline (Amabile, 2013). As such, both creative cognition approach and componential model of creativity suggest that dialectical thinking is a theoretically relevant cognitive potential that individuals may possess, and if tapped on, can engender creative performance.

Dialectical thinking as a form of creativity potential may exert a positive effect on employee creativity for three reasons. First, high dialectical thinkers tolerate and accept seemingly incompatible information or ideas in the environment. They expect change and do not believe in the need to take a side (Peng & Nisbett, 1999, 2000). As such, they are less likely to favor a single source of information and more likely to produce creative solutions that feature information from multiple sources (Peng & Nisbett, 1999). Second, with greater acceptance of contradictions, high dialectical thinkers are also more likely than low dialectical thinkers to explore disparate streams of ideas (Spencer-Rodgers, Williams, et al., 2010). During exploration, they engage in a cognitive frame of mind that breaks sets and synthesizes ideas across different mental categories. In so doing, high dialectical thinkers are adept at making new, unconventional connections among existing knowledge schemas to derive highly novel ideas (e.g., Fong, 2006). Third, in the process of exploration, high dialectical thinkers are also more likely to deviate from status quo than low dialectical thinkers (Spencer-Rodgers, Williams, et al., 2010). They are not fixated on aligning their ideas with existing norms and are more likely than low dialectical thinkers to experiment out of the box, enabling them to combine ideas in unconventional ways. Hence, high dialectical thinkers have higher potential in generating creative ideas than low dialectical thinkers.

#### BOUNDARY CONDITIONS: TRANSFORMATIONAL AND TRANSACTIONAL LEADERSHIP STYLES

However, creative ideas derived from thinking dialectically ("knowing") may not always translate to producing creative output at work ("doing"), as mixed findings in the dialectical thinking–creativity literature will attest to. We integrate Amabile's (1996) componential model of creativity and van Knippenberg and Hirst's (2020) motivational lens model to propose leadership style as an actionable, contextual moderator that can render dialectical thinking relevant for creativity by creating opportunities that allow employees to progress from "knowing" to "doing." The

theoretical integration explains how the relationship between dialectical thinking and creativity is moderated by activating versus inhibiting influences of leadership styles via intrinsic motivation.<sup>3</sup>

Although dialectical thinking has the potential to help employees derive highly novel ideas, these ideas may not be expressed and acted upon at the workplace because they are likely to be unconventional, and thus risky to voice or implement. We argue that transformational leadership shapes the work environment such that high dialectical thinkers can tap on their intrinsic motivation to express and act on their ideas (van Knippenberg & Hirst, 2020). That is, dialectical thinking's potential for creativity is activated in the presence of transformational leadership. By intellectually stimulating and encouraging employees to question existing assumptions about work processes (Gong, Huang, & Farh, 2009), employees are intrinsically motivated to express unconventional ideas obtained from connecting contradictory information. Individualized consideration—giving employees autonomy over work processes and assurance that each unique perspective will be respected (Bass, 1985)—signals to employees that novel ideas derived from combining contradictory ideas would likely be valued by their leaders, thus increasing their intrinsic motivation to express and act on them. Transformational leaders also provide inspirational motivation—a clear and compelling vision about the future (Bass, 1985; Yukl, 2002). In doing so, employees find meaning in their work and become intrinsically motivated to realize the leader's vision by actually expressing and acting on their novel ideas. Finally, transformational leaders exert idealized influence on employees—acting as role models for employees, and behaving in admirable ways that promote leader identification (Bass, 1985; Judge & Piccolo, 2004). Strong leader identification encourages employees to emulate their leaders in being ambitious and risk-taking, intrinsically motivating those high on dialectical thinking to voice and act on their ideas. In sum, transformational leaders provide employees with the intrinsic task motivation at work to progress from “knowing” to “doing,” thus strengthening the effect of dialectical thinking on creative performance.

Hypothesis 1. Transformational leadership has an activating effect on the relationship between dialectical thinking and employee creativity.

In contrast, dialectical thinking's potential for creativity is inhibited in the presence of transactional leadership. Transactional leaders shape the work environment in two ways such that high dialectical thinkers' intrinsic motivation becomes negatively affected, inhibiting them from progressing beyond “knowing” to “doing.” Transactional leaders focus on contingent rewards by establishing clear expectations and goals and rewarding employees for attaining them (Judge & Piccolo, 2004). Such an environment can hurt employees' intrinsic motivation to express and act on their novel ideas; rather, they may prefer to simply express ideas generated based on one informational source or perspective because such ideas are less likely to meet with resistance, allowing them to more easily meet expectations and get rewarded. A recent meta-analysis supports this line of reasoning: intrinsic motivation becomes less important for performance when incentives were made salient and directly tied to performance (Cerasoli, Nicklin, & Ford, 2014). Moreover, transactional leaders also engage in management-by-exception—they monitor employees' behaviors, anticipate problems, and take corrective actions before complications culminate at work (Judge & Piccolo, 2004). There is thus an emphasis on status quo and continuing successful past work practices. In such an environment, employees become overly fixated on averting mistakes, hurting their intrinsic motivation to express novel ideas because doing so is risky. In sum, when leaders focus on contingent rewards, and monitoring and correcting mistakes, high dialectical thinkers have lowered intrinsic motivation to express and act on their novel ideas.

Hypothesis 2. Transactional leadership has an inhibiting effect on the relationship between dialectical thinking and employee creativity.

#### Comparison of leadership styles

While research has separately uncovered different leadership styles that either activate or inhibit workplace creativity (e.g., Jung, 2001; Yoshida, Sendjaya, Hirst, & Cooper, 2014; Zhang & Bartol, 2010), our understanding of the comparative effects of different leadership styles remains theoretically and empirically limited. It is unclear whether leadership activators or inhibitors are stronger in terms of their impact on dialectical thinking's effect on creative performance. This comparison is novel and important because the general consensus in the literature is that leaders should enact activators to facilitate employee creativity. However, this conclusion is premature because the

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<sup>3</sup> By developing our theory based on Amabile's (1996) framework and van Knippenberg and Hirst's (2020) motivational lens model, we focused on intrinsic motivation as the main pathway by which transformational leadership moderates the effect of dialectical thinking on creativity. However, we acknowledge that there may be other pathways through which this effect can occur.

effect of inhibitors may be stronger than that of activators, and thus, avoiding inhibitors may be more effective instead. This comparison is also especially important as leaders often face time and resource constraints in the workplace and they simply cannot enact activating behaviors all the time, as recommended by the literature. Since the literature is silent about their relative strengths, we derive competing hypotheses to compare the strengths of their moderating influences on dialectical thinking's effect on creativity.

#### Inhibiting effect > activating effect

We contend that transactional leadership's inhibiting effect is stronger than transformational leadership's activating effect. Psychological research on the negativity bias has consistently shown that individuals pay more attention and respond more strongly to negative and inhibiting stimuli than positive and activating stimuli (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). For instance, Dasborough (2006) found support for the negativity bias in a study that explored leader–employee interactions. Specifically, when employees were asked to recall interactions that resulted in either positive or negative emotional reactions, they recalled significantly more negative interactions than positive interactions with their leaders. Negativity bias is salient at the workplace because it benefits employees to be aware of when leaders or colleagues may behave in a negative manner, in order to predict their future behaviors and avoid potential conflict or tensions (Wu, 2013). Transactional leadership behaviors in the context of creativity may be construed as negative stimuli because they discourage deviation from status quo and expression of unconventional ideas. This suggests that when deciding whether to progress from “knowing” to “doing,” high dialectical thinkers are motivated to pay more attention to their leaders' inhibiting behaviors rather than their activating behaviors, and therefore strengthening the former's effect. In addition, Cerasoli and colleagues' (2014) meta-analysis finds a “crowding out” effect—intrinsic motivation becomes less important to and predictive of performance in the presence of extrinsic incentives that are directly tied to performance. This finding suggests that, in the presence of transactional leadership (extrinsic contingent rewards and employees paying attention to negative stimuli), transformational leadership's favorable effect on intrinsic motivation becomes less significant. Thus, all things being equal, we argue that transactional leadership's inhibiting effect is stronger than transformational leadership's activating effect on the relationship between dialectical thinking and creativity.

#### Inhibiting effect > activating effect

An alternative prediction is that transactional leadership's inhibiting effect is weaker than transformational leadership's activating effect. Even though transactional leadership may present a roadblock for high dialectical thinkers due to its inhibiting influence on task motivation, the very nature of dialectical thinking allows people to better embrace, balance, and resolve contradictory goals. That is, high dialectical thinkers may be better than low dialectical thinkers at balancing the expression of their novel ideas while at the same time, conforming to their leaders' expectations for status quo norms and practices. For instance, high dialectical thinkers may still be intrinsically motivated to express novel ideas about certain aspects of their jobs, while conforming to what their leaders expect from them on other aspects of their jobs. As such, high dialectical thinkers can counter the inhibiting influence of transactional leadership. The inhibiting influence of transactional leadership may therefore be weaker than the activating influence of transformational leadership on the effect of dialectical thinking on creative performance.

Hypothesis 3a (b): Transactional leadership's inhibiting effect is stronger (weaker) than transformational leadership's activating effect on the relationship between dialectical thinking and employee creativity.

## METHOD

We test our hypotheses in two contexts wherein dialectical thinking is embraced: Thailand and India. Dialectical thinking is a pervasive feature of Asian philosophies in general and has influenced many Asian cultures (Schimmack, Oishi, & Diener, 2002). Given that Thailand's and India's dominant philosophical and religious traditions are Buddhism and Hinduism respectively (Salamon & Anheier, 1997), their cultures emphasize dialectic beliefs of thinking, which affect how individuals perceive and approach their work environment. As such, both contexts are ideal settings to test our hypotheses because many employees likely possess the dialectical thinking tendency that serves a form of untapped creativity potential. All data and analysis codes are available at the Open Science Framework [web page associated with this project:](https://osf.io/qh2e8/?view_only=7669daa5128d4518bb5935344f760cf1) [https://osf.io/qh2e8/?view\\_only=7669daa5128d4518bb5935344f760cf1](https://osf.io/qh2e8/?view_only=7669daa5128d4518bb5935344f760cf1)

## PARTICIPANTS AND PROCEDURE

### Study 1

Participants were employees of an information technology (IT) company in Thailand. The company is in one of the most competitive industries wherein employees are constantly exposed to fast-paced and contradictory ideas and expected to deliver creative solutions to the clients' technological needs. The company consists of three main departments including systems (offering system analyses, development, and implementation), support (providing technical support), and security (delivering IT security services). All departments had creativity as an important part of employees' performance index. We distributed surveys to 200 employees and 30 leaders and received 124 pairs of completed surveys (a pair of completed surveys consists of responses from an employee and that from his/her leader), giving an overall response rate of 62% for employees and 80% for leaders. There were no significant differences between demographics of respondents and non-respondents. The leaders were 58% male with an average age of 41.30 years ( $SD = 3.92$ ) and tenure of 13.24 years ( $SD = 5.54$ ). The employees were 53% male with an average age of 28.43 years ( $SD = 4.92$ ) and tenure of 3.93 years ( $SD = 2.49$ ). We translated all the materials from English to Thai and back-translated to ensure conceptual equivalence and comparability (Brislin, 1986).

### Study 2

We aimed to collect leader–employee dyad data across a variety of organizations to increase our findings' generalizability. We recruited a market research firm, Maction, in India to collect field data. Maction supports a panel of working adults who participate in market and academic research for monetary incentives. Maction independently authenticates the identity and employment status of panel members and adheres to a data collection procedure similar to that used by marketing research firms such as Qualtrics. 150 dyads were initially recruited and participation was restricted to those who worked full time in creative industries, resulting in a final sample of 105 dyads. There were no significant differences between the demographics of participants who worked in creative industries versus that of those who did not. Prior to data collection, we verified the identity of the participants via their contact details and made sure that participants' identities were consistent with the details provided in the sample list. Of the leaders, 81.9% were male with an average age of 35.34 years ( $SD = 6.37$ ) and tenure of 4.72 years ( $SD = 3.05$ ). Of the employees, 76.19% were male with an average age of 29.49 years ( $SD = 4.64$ ) and tenure of 3.15 years ( $SD = 1.78$ ). Survey materials were presented in English.

## MEASURES

Employees rated dialectical thinking with 14 items on the Dialectical Self Scale (Spencer-Rodgers et al., 2004) (1 = strongly disagree, 7 = strongly agree) (Study 1  $\alpha = .80$ ; Study 2  $\alpha = .81$ ). Employees rated transformational leadership with 20 items on the Multifactor Leadership Questionnaire (MLQ) Form 5X-Short (Avolio, Bass, & Zhu, 2004) (1 = strongly disagree, 7 = strongly agree) (Study 1  $\alpha = .98$ ; Study 2  $\alpha = .92$ ). Employees also rated transactional leadership with eight items on MLQ Form 5X-Short (Avolio et al., 2004) (1 = not at all, 5 = frequently, if not always) (Study 1  $\alpha = .80$ ; Study 2  $\alpha = .67$ ).<sup>4</sup> We used a different scale from that for transformational leadership to prevent participants from matching their responses for both sets of leadership items, that is, to reduce likelihood of any consistency motive on the part of the respondents (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), a practice used in leadership research (e.g., Chang, Chou, Miao, & Liou, 2021). To ensure that the scales were comparable, we centered them for analyses (Hoffman & Gavin, 1998).

Leaders rated observed creativity on 13 items (Zhou & George, 2001) widely used in field studies on creativity (e.g., Shin & Zhou, 2003; Tierney & Farmer, 2004) (1 = not characteristic at all, 5 = very characteristic) (Study 1  $\alpha = .98$ ; Study 2  $\alpha = .77$ ). In Study 1, each employee was rated by one leader, but a leader rated one or more employees. In Study 2, each employee was rated by one leader. Leader rated creativity is appropriate in our field studies because it captures observable expressed creativity under a particular supervisor's leadership as opposed to unexpressed creativity in the employees' minds. Following prior research, we also controlled for leaders' and employees' personal and professional characteristics (e.g., age, gender, and tenure) which may influence leader–employee relationships and employees' creativity (e.g., Amabile, Barsade, Mueller, & Staw, 2005; Xin & Pelled, 2003).

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<sup>4</sup> We measured two subscales: contingent reward and active management-by-exception. We excluded passive management-by-exception subscale as it has been conceptualized as “avoidant leadership” (Avolio et al., 2004), correlates positively with *laissez-faire* or “no leadership,” and correlates negatively with other MLQ subscales.

TABLE 1. Confirmatory Factor Analyses for Studies 1 and 2

| Model   | Factors                        | $\chi^2$ | df | $\Delta\chi^2$ | Df | CFI | TLI | SRMR | RMSEA |
|---------|--------------------------------|----------|----|----------------|----|-----|-----|------|-------|
| Study 1 |                                |          |    |                |    |     |     |      |       |
| Model 1 | 4-factor: DT, CRE, TRF, TRS    | 108.59   | 38 | -              | -  | .95 | .92 | .04  | .12   |
| Model 2 | 1-factor: DT + CRE + TRF + TRS | 498.41   | 44 | 389.82*        | 6  | .64 | .54 | .15  | .29   |
| Model 3 | 3-factor: DT, CRE, TRF + TRS   | 132.07   | 41 | 23.48*         | 3  | .93 | .90 | .06  | .13   |
| Study 2 |                                |          |    |                |    |     |     |      |       |
| Model 1 | 4-factor: DT, CRE, TRF, TRS    | 135.59   | 38 | -              | -  | .86 | .79 | .08  | .16   |
| Model 2 | 1-factor: DT + CRE + TRF + TRS | 281.55   | 44 | 145.96*        | 6  | .65 | .56 | .13  | .23   |
| Model 3 | 3-factor: DT, CRE, TRF + TRS   | 160.60   | 41 | 25.01*         | 3  | .82 | .76 | .09  | .17   |

Note. DT = dialectical thinking; CRE = employee creativity; TRF = transformational leadership; TRS = transactional leadership; CFI = comparative fit index; TLI = Tucker-Lewis index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation. A parceling strategy (Landis, Beal, & Tesluk, 2000; Little, Cunningham, Shahar, & Widaman, 2002) was used to reduce both the number of estimated factor loadings and sample size to parameter ratio as this ratio impacts the standard errors and stability of the estimates. Dialectical thinking and employee creativity were assessed with two composite items each. Leadership variables were reflected by their sub-dimensions. \* $p < .05$ .

## RESULTS

To examine discriminant validity, we test the measurement model of the four measures. Table 1 presents the results of confirmatory factors analyses, indicating that a four-factor model fits the data significantly better than a three- or one-factor model in both studies.

Table 2 presents the descriptive statistics and correlations among all variables, and Table 3 presents regression results for Study 1. We conduct regression analyses at the individual level (nested within leaders) because our theory conceptualizes leadership as individual-focused in nature wherein leaders engage each employee personally in our empirical setting (e.g., Shin & Zhou, 2003; Wang & Howell, 2010).<sup>5</sup> We center continuous variables used as a part of an interaction term at the grand mean (Hoffman & Gavin, 1998). First, we regress creativity on dialectical thinking, two leadership styles, and control variables. Results indicate a positive but non-significant relationship between dialectical thinking and creativity ( $b = .22$ ,  $SE = 0.16$ ,  $p = .19$ ). Next, we add both two-way interactions terms into the model. Results show a significant positive interaction effect between dialectical thinking and transformational leadership ( $b = .27$ ,  $SE = 0.13$ ,  $p = .05$ ), and a significant negative interaction effect between dialectical thinking and transactional leadership ( $b = -.87$ ,  $SE = 0.26$ ,  $p < .01$ ), thus supporting Hypotheses 1 and 2.<sup>6</sup> Simple slope analyses indicate that dialectical thinking enhances creativity at high transformational leadership ( $b = .57$ ,  $SE = 0.27$ ,  $p = .05$ ), while not affecting it at low transformational leadership ( $b = -.02$ ,  $SE = 0.16$ ,  $p = .89$ ) (Figure 1a). In contrast, dialectical thinking enhances creativity at low transactional leadership ( $b = .80$ ,  $SE = 0.24$ ,  $p < .01$ ), while not affecting it at high transactional leadership ( $b = -.25$ ,  $SE = 0.22$ ,  $p = .26$ ) (Figure 1b).

<sup>5</sup> We did not conceptualize or explore leadership constructs at Level 2 also due to methodological reasons. First, the sample size at the leader level if aggregated would be underpowered for us to test cross-level interactions. Second, aggregation indices indicate that aggregation may not be justified (transformational leadership: median  $r_{wg} = .71$  and mean  $r_{wg} = .57$ ,  $ICC(1) = .10$ ,  $ICC(2) = .40$ ,  $F = 1.67$ ,  $p < .05$ ; transactional leadership: median  $r_{wg} = .86$  and mean  $r_{wg} = .80$ ,  $ICC(1) = .06$ ,  $ICC(2) = .26$ ,  $F = 1.36$ ,  $p > .05$ ) (Klein & Kozlowski, 2000).

<sup>6</sup> We measured leader-member exchanges (LMX) as another potential control variable using seven items from Scandura and Graen's (1984) (1 = strongly disagree, 7 = strongly agree; Study 1  $\alpha = 0.94$ ). We did not include LMX as a control variable in our final analyses because of its high correlation with transformational leadership variable ( $r = 0.86$ ,  $p < .01$ ) which evoked concerns about multicollinearity, and because of its high VIF value (4.35). However, Study 1 results still hold even when LMX was included as a control variable.



TABLE 2. Study 1 Correlations and Descriptive Statistics

| Variables                                | Mean  | SD    | 1     | 2     | 3     | 4     | 5     | 6    |
|--|-------|-------|-------|-------|-------|-------|-------|------|
| 1 Employee Creativity                    | 3.24  | 0.78  | (.98) |       |       |       |       |      |
| 2 Dialectical Thinking                   | 0.02  | 0.32  | .15   | (.80) |       |       |       |      |
| 3 Transformational Leadership            | 0.09  | 1.07  | .15   | .17   | (.98) |       |       |      |
| 4 Transactional Leadership               | -0.01 | 0.60  | -.02  | .14   | .59*  | (.80) |       |      |
| 5 Employee Gender (Male = 1, Female = 0) | 0.53  | 0.50  | .21*  | .20*  | .05   | -.11  | -     |      |
| 6 Employee Age                           | 28.43 | 4.92  | .25*  | .07   | -.12  | .01   | -.11  | -    |
| 7 Employee Tenure (years)                | 3.93  | 2.49  | .15   | -.01  | -.14  | -.05  | -.12  | .55* |
| 8 Leader Gender (Male = 1, Female = 0)   | 0.51  | 0.50  | .30*  | .11   | .29*  | .19*  | .21*  | .10  |
| 9 Leader Age                             | 41.30 | 3.92  | -.05  | .03   | .07   | .04   | .15   | .03  |
| 10 Leader Tenure (years)                 | 13.24 | 5.54  | -.16  | -.04  | .06   | .06   | .00   | .03  |
| 11 System Department Dummy               | 0.21  | 0.41  | .23*  | -.09  | .03   | -.12  | .09   | -.02 |
| 12 Support Department Dummy              | 0.13  | 0.34  | .02   | .08   | .05   | .13   | .22*  | -.06 |
| 13 Security Department Dummy             | 0.66  | 0.48  | -.21* | .02   | -.06  | .02   | -.23* | -.06 |
| 14 Number of Reports                     | 12.90 | 6.79  | -.33* | -.06  | -.14  | -.13  | -.07  | -.10 |
|  | 7     | 8     | 9     | 10    | 11    | 12    | 13    | 14   |
| 7 Employee Tenure (years)                | -     |       |       |       |       |       |       |      |
| 8 Leader Gender (Male = 1, Female = 0)   | .12   | -     |       |       |       |       |       |      |
| 9 Leader Age                             | -.07  | .42*  | -     |       |       |       |       |      |
| 10 Leader Tenure (years)                 | -.03  | -.04  | .22*  | -     |       |       |       |      |
| 11 System Department Dummy               | .05   | .19*  | .20*  | -.25* | -     |       |       |      |
| 12 Support Department Dummy              | -.02  | .14   | .30*  | .33*  | -.20* | -     |       |      |
| 13 Security Department Dummy             | -.03  | -.26* | -.39* | -.02  | -.72* | -.54* | -     |      |
| 14 Number of Reports                     | -.04  | -.31* | -.27* | .37*  | -.15  | -.04  | .16   | -    |

Note. There were a total of 24 leaders and 124 employees; Internal consistency reliabilities (Cronbach's alpha) on the diagonal, in parentheses. Dialectical Thinking, Transformational Leadership, and Transactional Leadership are centered at the grand mean. \* $p < .05$ .

Table 4 presents descriptive statistics and variable correlations, and Table 5 presents regression results for Study 2. Results indicate a negative significant relationship between dialectical thinking and creativity ( $b = -.13$ ,  $SE = 0.06$ ,  $p < .05$ ). After entering both interactions terms, results reveal a significant positive interaction effect between dialectical thinking and transformational leadership ( $b = .25$ ,  $SE = 0.11$ ,  $p = .03$ ), and a significant negative interaction effect between dialectical thinking and transactional leadership ( $b = -.28$ ,  $SE = 0.14$ ,  $p = .055$ ), supporting Hypotheses 1 and 2.<sup>7</sup> Simple slope analyses indicate that dialectical thinking negatively influences creativity at low transformational leadership ( $b = -.36$ ,  $SE = 0.12$ ,  $p < .01$ ), while not affecting it at high transformational leadership ( $b = -.03$ ,  $SE = 0.08$ ,  $p = .77$ ) (Figure 2a). In contrast, dialectical thinking negatively influences creativity at high transactional leadership ( $b = -.31$ ,  $SE = 0.11$ ,  $p < .01$ ), while not affecting it at low transactional leadership ( $b = -.08$ ,  $SE = 0.07$ ,  $p = .31$ ) (Figure 2b).

Since Hypotheses 1 and 2 are supported in both studies, we conduct an internal meta-analysis of our results. Conducting a meta-analysis within a manuscript provides stronger evidence for the replicability of research findings and increases precision of estimates via narrower confidence intervals (Goh, Hall, & Rosenthal, 2016). A random-effects meta-analysis (Schmidt, Oh, & Hayes, 2009; bootstrap sample at 1000) shows that transformational leadership positively moderates (estimate: 0.26, 95% CI: 0.24, 0.28) and transactional leadership negatively moderates (estimate: -0.54, 95% CI: -0.95, -0.12) the effect of dialectical thinking on employee creativity, supporting our overall theory that transformational leadership has an activating effect and transactional leadership has an inhibiting effect.

<sup>7</sup> Study 2 results still hold even when LMX, servant leadership, empowering leadership, and positive and negative variables were separately included as control variables. More details are available upon request.

TABLE 3. Study 1 Regression Results

| Variables  | DV = Employee Creativity |               |
|--|--------------------------|---------------|
|  | Model 1                  | Model 2       |
| Dialectical Thinking                               | 0.22 (0.16)              | 0.24 (0.16)   |
| Transformational Leadership                        | 0.12 (0.08)              | 0.10 (0.08)   |
| Transactional Leadership                           | -0.23 (0.14)             | -0.21 (0.13)  |
| Dialectical Thinking × Transformational Leadership | -                        | 0.27 (0.13)*  |
| Dialectical Thinking × Transactional Leadership    | -                        | -0.87 (0.26)* |
| <b>Controls</b>                                    |                          |               |
| Employee Gender (male = 1)                         | 0.21 (0.13)              | 0.19 (0.13)   |
| Employee Age (years)                               | 0.04 (0.02)*             | 0.05 (0.02)*  |
| Employee Tenure (years)                            | -0.01 (0.03)             | -0.02 (0.03)  |
| Leader Gender (male = 1)                           | 0.34 (0.18)              | 0.37 (0.19)   |
| Leader Age (years)                                 | -0.07 (0.03)*            | -0.07 (0.03)* |
| Leader Tenure (years)                              | 0.01 (0.01)              | 0.01 (0.01)   |
| System Department Dummy                            | 0.43 (0.17)*             | 0.51 (0.18)*  |
| Support Department Dummy                           | 0.24 (0.26)              | 0.25 (0.27)   |
| Number of Reports                                  | -0.03 (0.02)             | -0.03 (0.02)* |
| Overall R-Square                                   | 0.35                     | 0.38          |
| R-Square Change                                    | -                        | 0.03          |

Note. Standard errors are in parentheses; Dialectical Thinking, Transformational Leadership, and Transactional Leadership are centered at the grand mean to increase interpretability of the interaction coefficients. We used clustering approach instead of multilevel modeling to account for the nested nature of the data. Calculating clustered standard errors is a more straightforward and practical approach than multilevel modeling (Primo, Jacobsmeier, & Milyo, 2007, p. 452). In addition, hierarchical linear modeling (HLM) would be inappropriate because of the lack of agreement in the leadership style variables according to the aggregation indices reported in footnote 5. \* $p < .05$ .

To test Hypotheses 3a and 3b, we compare the two interaction terms. The Wald test indicates that the negative interaction term between dialectical thinking and transactional leadership is significantly stronger than the positive interaction term between dialectical thinking and transformational leadership in both studies (Study 1:  $F(1, 23) = 10.59, p < .01$ ; Study 2:  $F(1, 89) = 5.50, p = .02$ ), thus supporting Hypothesis 3a. We obtain consistent results even when both leadership variables are standardized.

## DISCUSSION

This research makes notable contributions to both theory and practice. First, our comparison of leadership styles points to an interesting discovery: transactional leadership's inhibiting effect is stronger than transformational leadership's activating effect. This finding has significant theoretical implications as it qualifies the prevailing consensus that leaders should focus on enacting transformational leadership (e.g., Gong et al., 2009; Shin & Zhou, 2003) and suggests that avoiding transactional leadership behaviors is more effective instead. This finding also has notable practical implications: managers simply need to engage in fewer transactional leadership behaviors. They can be more effective in engendering creativity by first identifying high dialectical thinkers and then deciding on a leadership style suitable for them; which would be to minimize transactional leadership and dispense with transformational leadership. In so doing, leaders can better direct their time and resources to other tasks. Second, we note that the specific interaction patterns differ across our two field studies, even though there are a few similarities. Transformational leadership has an activating influence in that it strengthens dialectical thinking's positive effect (Study 1) and weakens its negative effect (Study 2) on creativity. In contrast, transactional leadership has an inhibiting influence in that it weakens dialectical thinking's positive effect (Study 1) and strengthens its negative effect (Study 2) on creativity. These findings suggest that regardless of dialectical thinking's main effect on creativity, transformational leadership encourages whereas transactional leadership discourages "doing"—the expression and implementation of ideas derived from dialectical thinking. While our findings show that leadership style is a moderator of the relationship between dialectical thinking and creativity, these findings do not fully resolve

the mixed findings in the literature. Collectively, our results show that dialectical thinking's effect on creativity is highly context-sensitive and scholars should go beyond theorizing main effects and critically consider other contextual moderators in future work.

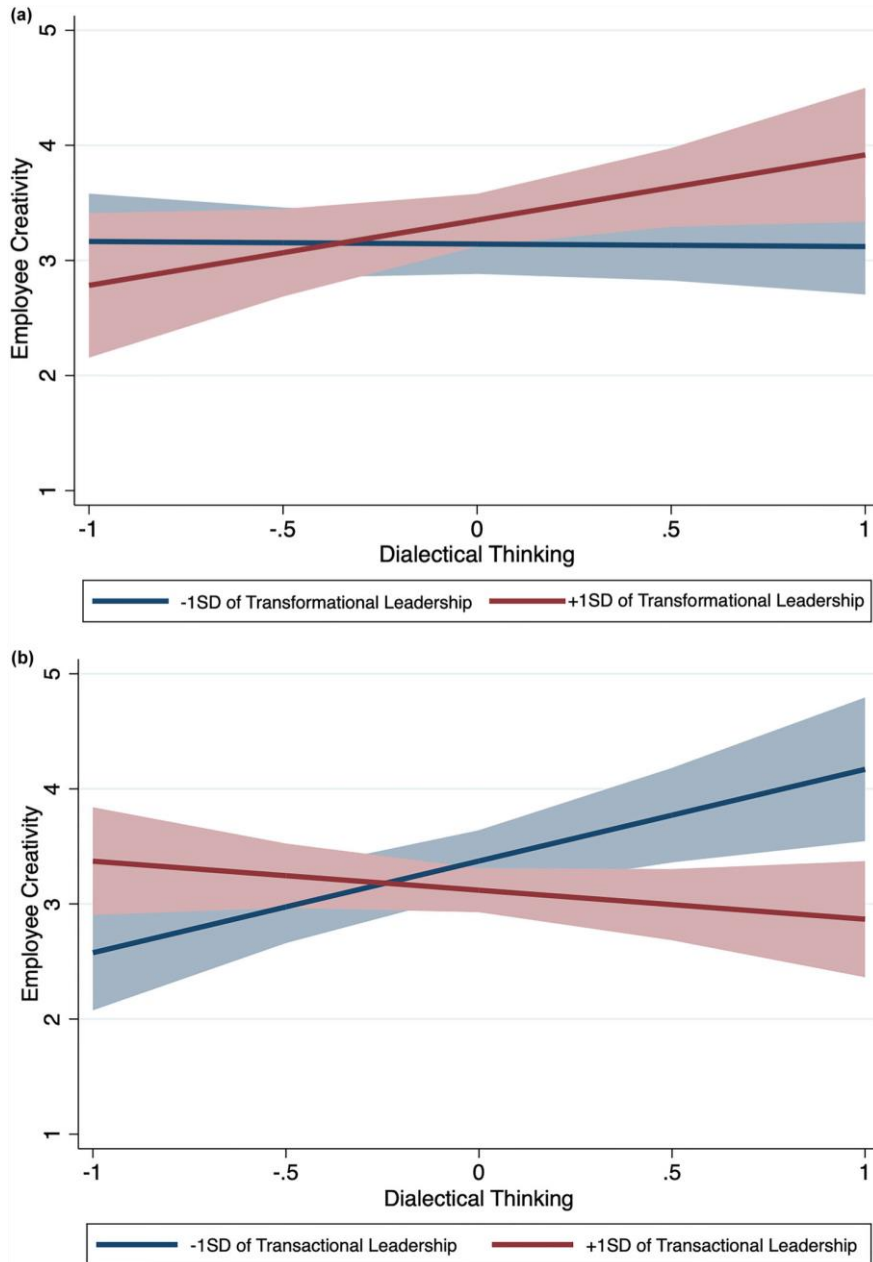


FIGURE 1. (a) Study 1—Relationship between dialectical thinking and employee creativity moderated by transformational leadership with continuous confidence intervals plotted. (b) Study 1—Relationship between dialectical thinking and employee creativity moderated by transactional leadership with continuous confidence intervals plotted.

TABLE 4. Study 2 Correlations and Descriptive Statistics (N = 105 dyads)

| Variables                                | Mean     | SD       | 1        | 2         | 3         | 4         | 5         | 6         |
|--|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| 1 Employee Creativity                    | 4.28     | 0.36     | (.77)    |           |           |           |           |           |
| 2 Dialectical Thinking                   | 0.00     | 0.69     | .08      | (.81)     |           |           |           |           |
| 3 Transformational Leadership            | 0.00     | 0.69     | .21*     | .55*      | (.92)     |           |           |           |
| 4 Transactional Leadership               | 0.00     | 0.42     | .12      | .15       | .41*      | (.67)     |           |           |
| 5 Employee Gender (Male = 1, Female = 0) | 0.76     | 0.43     | .05      | .16       | -.10      | -.01      | -         |           |
| 6 Employee Age                           | 29.49    | 4.64     | -.21*    | -.18      | -.30*     | .01       | .02       | -         |
| 7 Employee Tenure (years)                | 3.15     | 1.78     | -.24*    | .12       | -.04      | -.05      | -.02      | .28*      |
| 8 Leader Gender (Male = 1, Female = 0)   | 0.82     | 0.39     | .29*     | .03       | -.07      | .05       | .26*      | .01       |
| 9 Leader Age                             | 35.34    | 6.37     | -.08     | -.29*     | -.45*     | -.11      | -.08      | .62*      |
| 10 Leader Tenure (years)                 | 4.72     | 3.05     | .19*     | .36*      | .24*      | .09       | .06       | .18       |
| 11 Leader English Proficiency            | 3.34     | 0.48     | -.21*    | -.45*     | -.37*     | -.19      | .07       | .16       |
| 12 Employee English Proficiency          | 3.16     | 0.42     | -.29*    | -.18      | .03       | -.08      | .00       | .00       |
| 13 Leader Management Level               | 2.96     | 0.60     | -.04     | -.02      | .16       | .03       | -.04      | -.01      |
| 14 Employee Management Level             | 2.30     | 0.81     | .28*     | .52*      | .56*      | .07       | -.02      | -.25*     |
|  | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> | <b>11</b> | <b>12</b> | <b>13</b> | <b>14</b> |
| 7 Employee Tenure (years)                | -        |          |          |           |           |           |           |           |
| 8 Leader Gender (Male = 1, Female = 0)   | .00      | -        |          |           |           |           |           |           |
| 9 Leader Age                             | .14      | .13      | -        |           |           |           |           |           |
| 10 Leader Tenure (years)                 | .31*     | .17      | .27*     | -         |           |           |           |           |
| 11 Leader English Proficiency            | -.16     | -.13     | .20*     | -.36*     | -         |           |           |           |
| 12 Employee English Proficiency          | -.12     | -.17     | -.19*    | -.32*     | .44*      | -         |           |           |
| 13 Leader Management Level               | .13      | -.11     | .03      | .05       | -.15      | -.24*     | -         |           |
| 14 Employee Management Level             | .11      | .05      | -.23*    | .44       | -.37*     | -.28*     | .34*      | -         |

Note. There were a total of 105 leaders and 105 employees; Internal consistency reliabilities (Cronbach's alpha) on the diagonal, in parentheses. Dialectical Thinking, Transformational Leadership, and Transactional Leadership are centered at the grand mean. \* $p < .05$ .

Third, we integrate research on creativity, dialectical thinking, and leadership styles to expand current understanding of dialectical thinking's effect on creativity. Despite dialectical thinking being conceptually and positively related to creativity, empirical findings have been mixed. As existing studies only involved students in laboratories (e.g., Paletz & Peng, 2009), the lack of field data and inquiry into contextual moderators clouds our understanding of this relationship. Our research thus examines the effect of dialectical thinking on creativity in two field studies. A meta-analysis of both studies' results shows that dialectical thinking's effect on creativity is null (estimate:  $-0.00$ , 95% CI:  $-0.30, 0.29$ ): Study 1 shows a non-significant, positive effect, whereas Study 2 shows a significant negative effect.<sup>8</sup> One reason for the null effect may be that "knowing" does not mean "doing." Being high on dialectical thinking and hence able to generate new ideas does not necessarily translate into observed workplace creativity because these ideas are not expressed or acted upon. We show that, to harness the creativity benefits of dialectical thinking, there ought to be an appropriate environment that encourages "doing," which can be created with specific leadership styles or other contextual moderators.

<sup>8</sup> This result should be interpreted with caution. The positive, non-significant bivariate correlation between dialectical thinking and creativity indicates that there is most likely a suppressor effect in Study 2 that contributed to the negative main effect of dialectical thinking on creativity.

TABLE 5. Study 2 Regression Results (N = 105 dyads)

| Variables  | DV = Employee Creativity |                |
|--|--------------------------|----------------|
|  | Model 1                  | Model 2        |
| Dialectical Thinking                               | -0.13 (0.06)*            | -0.19 (0.07)*  |
| Transformational Leadership                        | 0.10 (0.08)              | 0.22 (0.09)*   |
| Transactional Leadership                           | 0.00 (0.08)              | -0.03 (0.09)   |
| Dialectical Thinking × Transformational Leadership | -                        | 0.25 (0.11)*   |
| Dialectical Thinking × Transactional Leadership    | -                        | -0.28 (0.14)** |
| <b>Controls</b>                                    |                          |                |
| Employee Gender (male = 1)                         | 0.03 (0.08)              | 0.03 (0.08)    |
| Employee Age (years)                               | -0.00 (0.01)             | -0.00 (0.01)   |
| Employee Tenure (years)                            | -0.05 (0.02)*            | -0.06 (0.02)*  |
| Leader Gender (male = 1)                           | 0.19 (0.09)*             | 0.18 (0.09)*   |
| Leader Age (years)                                 | -0.00 (0.01)             | -0.00 (0.01)   |
| Leader Tenure (years)                              | 0.02 (0.01)              | 0.02 (0.01)    |
| Leader English Proficiency                         | -0.03 (0.09)             | 0.01 (0.09)    |
| Employee English Proficiency                       | -0.23 (0.10)*            | -0.30 (0.10)*  |
| Leader Management Level                            | -0.09 (0.06)             | -0.09 (0.06)   |
| Employee Management Level                          | 0.09 (0.06)              | 0.11 (0.06)**  |
| Overall R-Square                                   | 0.33                     | 0.37           |
| R-Square Change                                    | -                        | 0.04           |

Note. Standard errors are in parentheses; Dialectical Thinking, Transformational Leadership, and Transactional Leadership are centered at the grand mean to increase interpretability of the interaction coefficients; English Proficiency was rated by survey administrators from the local market research firm in India on this scale: 1 = Elementary proficiency, 2 = Limited working proficiency, 3 = Professional working proficiency, 4 = Full professional proficiency, and 5 = Native or bilingual proficiency. Management Level refers to the level that participants were at within their organizations and was self-reported on this scale: 1 = Non-Management, 2 = First-line supervisor, 3 = Middle-management, and 4 = Upper-management. \* $p < .05$ , \*\*  $p < .10$ .

What may explain the different main effects of dialectical thinking in our two studies? Compared with Study 1's sample, Study 2's employees have lower-level positions and thus probably have less autonomy at work. As such, their leaders would have been more likely to engage in transactional behaviors than leaders in Study 1. Indeed, in Study 1 where the mean of transactional leadership is lower ( $M = 3.63$ ), the main effect of dialectical thinking is positive, whereas in Study 2 where transactional leadership mean is higher ( $M = 4.02$ ), the main effect is negative. Another way to reconcile these findings is to consider the cultural contexts of our samples. Thailand (Study 1) is culturally loose (Triandis, 2004). A loose culture embraces deviation from norms and is an appropriate environment for high dialectical thinkers to flourish in. In contrast, India (Study 2) is culturally tight (Gelfand et al., 2011). A tight culture emphasizes compliance with status quo and strict sanctions exist to punish people who deviate from norms, making it an incompatible environment for high dialectical thinkers to thrive in. Novel ideas generated may not be well-received in tight cultures in part because such ideas may be deemed unconventional.

Our research has some limitations. First, our single-rater creativity measure is a limitation that future research should address. However, despite the current debate about the limitations of a leader's rating of employee creativity (e.g., LMX and bias toward socially approved solutions), it is nevertheless still valid as he/she best understands the employee's work context, arguably more than peers or supervisors from other departments would. Second, similar to previous work on leadership, our research faces the causal cross-rating issue, whereby a relationship potentially colors both parties' ratings of each other. One way to address this is to control for LMX since it is an indicator of the relationship quality between a leader and a follower. In both studies, our results hold with and without LMX controlled for (see footnotes 6 and 7). Third, since we measured the leadership styles using different scales for the purpose of reducing any consistency motive (Podsakoff et al., 2003), it raises concerns about the comparison of the interaction terms between dialectical thinking and both leadership styles via the Wald test, even though we centered our variables before analyses. To ensure that the comparison result is robust, we standardized the focal variables and reran the analyses.

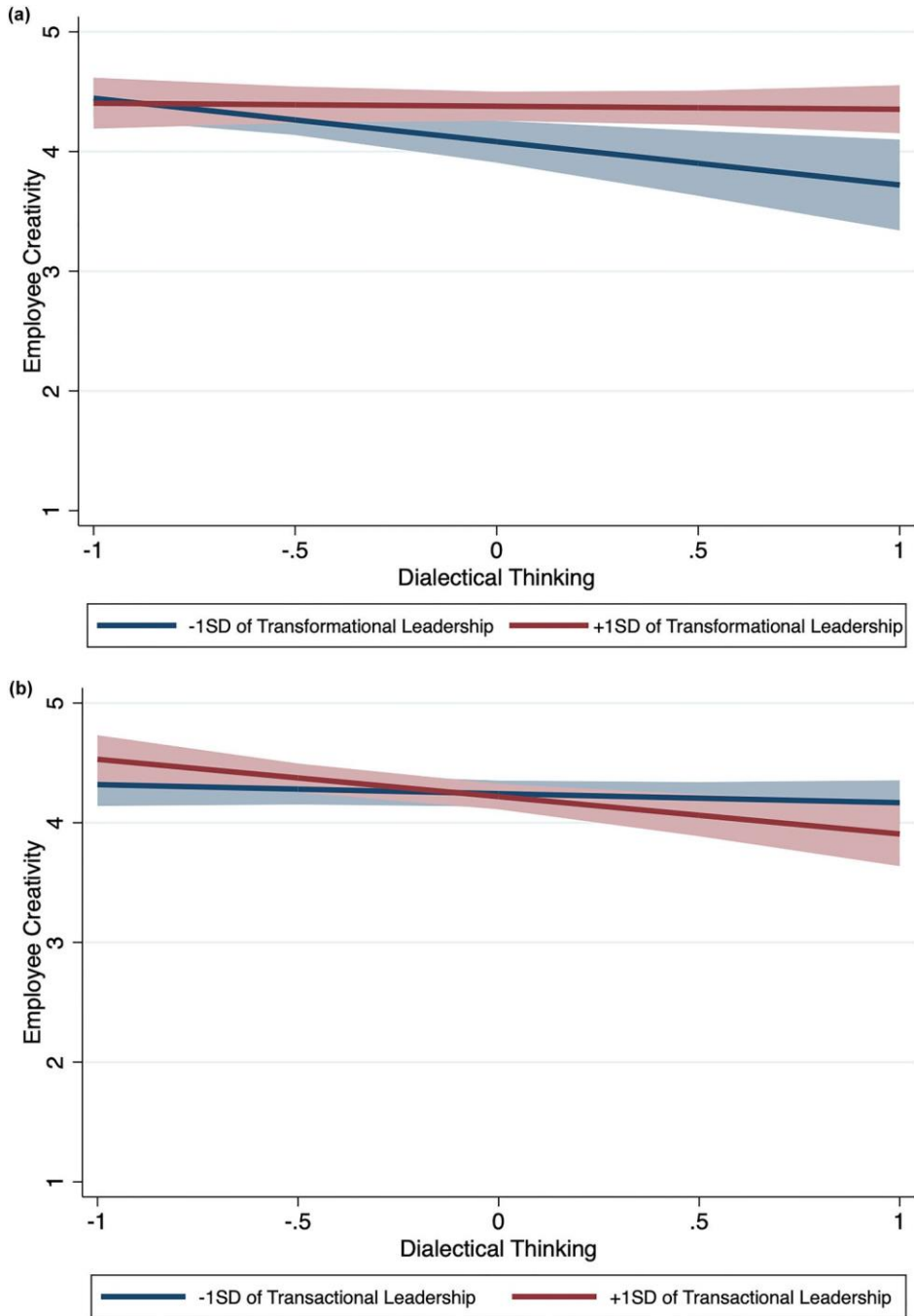


FIGURE 2. (a) Study 2—Relationship between dialectical thinking and employee creativity moderated by transformational leadership with continuous confidence intervals plotted. (b) Study 2— Relationship between dialectical thinking and employee creativity moderated by transactional leadership with continuous confidence intervals plotted.

We found consistent results that the inhibiting influence of transactional leadership was stronger than the activating influence of transformational leadership. Fourth, we conducted our studies in Asian contexts where dialectical thinking is generally embraced (Paletz et al., 2018). However, we are not overly concerned as dialectical thinking has been measured and manipulated in both Asian and Western samples (e.g., Alter & Kwan, 2009). Future work should nonetheless replicate these findings in Western samples, by examining other forms of creativity potentials relevant to Western cultures and the comparative moderating effects of leadership styles.

In conclusion, by integrating research on creativity, dialectical thinking, and leadership styles, our work underscores the importance of considering leadership styles as contextual moderators in closing the gap between “knowing” and “doing” when it comes to harnessing employees’ creativity potentials via dialectical thinking. In addition, our leadership style comparison finding qualifies current consensus by showing that leaders are better served by doing less, that is, avoiding transactional leadership rather than enacting transformational leadership when working with employees high on dialectical thinking.

### DATA AVAILABILITY STATEMENT

All data and analysis codes are available at the Open Science Framework web page associated with this project: [https://osf.io/qh2e8/?view\\_only=7669daa5128d4518bb5935344f760cf1](https://osf.io/qh2e8/?view_only=7669daa5128d4518bb5935344f760cf1)

### REFERENCES

- Alter, A.L., & Kwan, V.S. (2009). Cultural sharing in a global village: Evidence for extracultural cognition in European Americans. *Journal of Personality and Social Psychology*, 96, 742–760.
- Amabile, T.M. (1988). A model of creativity and innovation in organizations. In B.M. Staw & L.L. Cummings (Eds.), *Research in organizational behavior* (pp. 123–167). Greenwich, CT: JAI.
- Amabile, T.M. (1996). *Creativity in context: Update to the social psychology of creativity*. Boulder, CO: Westview.
- Amabile, T.M. (2013). Componential theory of creativity. In E. Kessler (Ed.), *Encyclopedia of management theory* (pp. 135–140). Thousand Oaks, CA: SAGE.
- Amabile, T.M., Barsade, S.G., Mueller, J.S., & Staw, B.M. (2005). Affect and creativity at work. *Administrative Science Quarterly*, 50, 367–403.
- Anderson, N., Potocnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40, 1297–1333.
- Antonakis, J., & House, R.J. (2014). Instrumental leadership: Measurement and extension of transformational–transactional leadership theory. *The Leadership Quarterly*, 25, 746–771.
- Avolio, B.J., Bass, B.M., & Zhu, F.W.W. (2004). Multifactor leadership questionnaire: manual and sampler set. Menlo Park, CA: Mind Garden.
- Bass, B.M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Baumeister, R.F., Bratslavsky, E., Finkenauer, C., & Vohs, K.D. (2001). Bad is stronger than good. *Review of General Psychology*, 5, 323–370.
- Boucher, H.C. (2011). The dialectical self-concept II: Cross-role and within-role consistency, well-being, self-certainty, and authenticity. *Journal of Cross-Cultural Psychology*, 42, 1251–1271.
- Brislin, R.W. (1986). The wording and translation of research instruments. In W.J. Lonner & J.W. Berry (Eds.), *Field methods in cross-cultural research* (pp. 137–164). Beverly Hills, CA: Sage.
- Cerasoli, C.P., Nicklin, J.M., & Ford, M.T. (2014). Intrinsic motivation and extrinsic incentives jointly predict performance: A 40year meta-analysis. *Psychological Bulletin*, 140, 980–1008.
- Chang, H.T., Chou, Y.J., Miao, M.C., & Liou, J.W. (2021). The effects of leadership style on service quality: Enrichment or depletion of innovation behaviour and job standardisation. *Total Quality Management & Business Excellence*, 32(5–6), 676–692.
- Choi, I., & Choi, Y. (2002). Culture and self-concept flexibility. *Personality and Social Psychology Bulletin*, 28, 1508–1517.
- Choi, I., & Nisbett, R.E. (2000). Cultural psychology of surprise: Holistic theories and recognition of contradiction. *Journal of Personality and Social Psychology*, 79, 890–905.
- Chua, R.Y.J., & Iyengar, S.S. (2008). Creativity as a matter of choice: Prior experience and task instruction as boundary conditions for the positive effect of choice on creativity. *Journal of Creative Behavior*, 42, 164–180.
- Clarke, S. (2013). Safety leadership: A meta-analytic review of transformational and transactional leadership styles as antecedents of safety behaviors. *Journal of Occupational and Organizational Psychology*, 86, 22–49.
- Dasborough, M.T. (2006). Cognitive asymmetry in employee emotional reactions to leadership behaviors. *The Leadership Quarterly*, 17, 163–178.
- Dewett, T. (2006). Exploring the role of risk in employee creativity. *Journal of Creative Behavior*, 40, 27–45.
- Finke, R.A., Ward, T.B., & Smith, S.M. (1992). *Creative cognition: Theory, research, and applications*. Cambridge, MA: MIT Press.
- Fong, C.T. (2006). The effects of emotional ambivalence on creativity. *Academy of Management Journal*, 49, 1016–1030.

- Gelfand, M.J., Raver, J.L., Nishii, L., Leslie, L.M., Lun, J., Lim, B.C., ... & Yamaguchi, S. (2011). Differences between tight and loose cultures: A 33-nation study. *Science*, 332, 1100–1104.
- Goh, J.X., Hall, J.A., & Rosenthal, R. (2016). Mini meta-analysis of your own studies: Some arguments on why and a primer on how. *Social and Personality Psychology Compass*, 10, 535–549.
- Gong, Y., Huang, J.C., & Farh, J.L. (2009). Employee learning orientation, transformational leadership, and employee creativity: The mediating role of employee creative self-efficacy. *Academy of Management Journal*, 52, 765–778.
- Hideg, I., & Ferris, D.L. (2017). Dialectical thinking and fairness-based perspectives of affirmative action. *Journal of Applied Psychology*, 102, 782–801.
- Hoffman, D.A., & Gavin, M.B. (1998). Centering decisions in hierarchical linear models: Implications for research in organizations. *Journal of Management*, 24, 623–641.
- Hughes, D.J., Lee, A., Tian, A.W., Newman, A., & Legood, A. (2018). Leadership, creativity, and innovation: A critical review and practical recommendations. *The Leadership Quarterly*, 29, 549–569.
- Hui, C.M., Fok, H.K., & Bond, M.H. (2009). Who feels more ambivalence? Linking dialectical thinking to mixed emotions. *Personality and Individual Differences*, 46, 493–498.
- Ji, L.J., Nisbett, R.E., & Su, Y. (2001). Culture, change, and prediction. *Psychological Science*, 12, 450–456.
- Judge, T.A., & Piccolo, R.F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89, 755–768.
- Jung, D.I. (2001). Transformational and transactional leadership and their effects on creativity in groups. *Creativity Research Journal*, 13, 185–195.
- Klein, K.J., & Kozlowski, S.W. (2000). From micro to meso: Critical steps in conceptualizing and conducting multilevel research. *Organizational Research Methods*, 3, 211–236.
- Landis, R.S., Beal, D.J., & Tesluk, P.E. (2000). A comparison of approaches to forming composite measures in structural equation models. *Organizational Research Methods*, 3, 186–207.
- Leung, A.K., Liou, S., Miron-Spektor, E., Koh, B., Chan, D., Eisenberg, R., & Schneider, I. (2018). Middle ground approach to paradox: Within-and-between-culture examination of the creative benefits of paradoxical frames. *Journal of Personality and Social Psychology*, 114, 443–464.
- Little, T.D., Cunningham, W.A., Shahar, G., & Widaman, K.F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, 9, 151–173.
- Miron-Spektor, E., Gino, F., & Argote, L. (2011). Paradoxical frames and creative sparks: Enhancing individual creativity through conflict and integration. *Organizational Behavior and Human Decision Processes*, 116, 229–240.
- Mobley, M.I., Doares, L.M., & Mumford, M.D. (1992). Process analytic models of creative capacities: Evidence for the combination and reorganization process. *Creativity Research Journal*, 5, 125–155.
- Nisbett, R.E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic versus analytic cognition. *Psychological Review*, 108, 291–310.
- Nonaka, I. (1991). The knowledge-creating company. *Harvard Business Review*, 69, 96–104.
- Paletz, S.B.F., Bogue, K., Miron-Spektor, E., & Spencer-Rodgers, J. (2018). Dialectical thinking and creativity from many perspectives: Contradiction and tension. In J. Spencer-Rodgers & K. Peng (Eds.), *The psychological and cultural foundations of East Asian cognition: Contradiction, change, and holism* (pp. 267–308). Oxford: Oxford University Press.
- Paletz, S.B.F., & Peng, K. (2009). Problem finding and contradiction: Examining the relationship between naive dialectical thinking, ethnicity, and creativity. *Creativity Research Journal*, 21, 139–151.
- Peng, K., & Nisbett, R.E. (1999). Culture, dialectics, and reasoning about contradiction. *American Psychologist*, 54, 741–754.
- Peng, K., & Nisbett, R.E. (2000). Dialectical responses to questions on dialectical thinking. *American Psychologist*, 55, 1067–1068.
- Pfeffer, J., & Sutton, R.I. (2000). *The knowing-doing gap: How smart companies turn knowledge into action*. Boston: Harvard Business School Press.
- Pieterse, A.N., Van Knippenberg, D., Schippers, M., & Stam, D. (2010). Transformational and transactional leadership and innovative behavior: The moderating role of psychological empowerment. *Journal of Organizational Behavior*, 31, 609–623.
- Podsakoff, P., MacKenzie, S., Lee, J., & Podsakoff, N. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Primo, D.M., Jacobsmeier, M.L., & Milyo, J. (2007). Estimating the impact of state policies and institutions with mixed-level data. *State Politics and Policy Quarterly*, 7, 446–459.
- Salamon, L.M., & Anheier, H.K. (1997). *Defining the nonprofit sector: A cross-national analysis*. Manchester, UK: Manchester University Press.
- Scandura, T.A., & Graen, G.B. (1984). Moderating effects of initial leader-member exchange status on the effects of a leadership intervention. *Journal of Applied Psychology*, 69, 428–436.
- Schimmack, U., Oishi, S., & Diener, E. (2002). Cultural influences on the relation between pleasant emotions and unpleasant emotions: Asian dialectic philosophies or individualism-collectivism? *Cognition and Emotion*, 16, 705–719.
- Schmidt, F.L., Oh, I.S., & Hayes, T.L. (2009). Fixed- versus random-effects models in meta-analysis: Model properties and an empirical comparison of differences in results. *British Journal of Mathematical and Statistical Psychology*, 62, 97–128.



- Shalley, C.E., & Gilson, L.L. (2004). What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. *The Leadership Quarterly*, 15, 33–53.
- Shin, S.J., & Zhou, J. (2003). Transformational leadership, conservation, and creativity: Evidence from Korea. *Academy of Management Journal*, 46, 703–714.
- Spencer-Rodgers, J., Peng, K., & Wang, L. (2010). Dialecticism and the co-occurrence of positive and negative emotions across cultures. *Journal of Cross-Cultural Psychology*, 41, 109–115.
- Spencer-Rodgers, J., Peng, K., Wang, L., & Hou, Y. (2004). Dialectical self-esteem and East-West differences in psychological wellbeing. *Personality and Social Psychology Bulletin*, 30, 1416–1432.
- Spencer-Rodgers, J., Williams, M.J., & Peng, K. (2010). Cultural differences in expectations of change and tolerance for contradiction: A decade of empirical research. *Personality and Social Psychology Review*, 14, 296–312.
- Spencer-Rodgers, J., Williams, M.J., & Peng, K. (2012). Culturally based lay beliefs as a tool for understanding intergroup and intercultural relations. *International Journal of Intercultural Relations*, 36, 169–178.
- Tierney, P., & Farmer, S.M. (2004). The Pygmalion process and employee creativity. *Journal of Management*, 30, 413–432.
- Triandis, H.C. (2004). The many dimensions of culture. *Academy of Management Perspectives*, 18, 88–93.
- van Knippenberg, D., & Hirst, G. (2020). A motivational lens model of person 9 situation interactions in employee creativity. *Journal of Applied Psychology*, 105, 1129–1144.
- Wang, G., Oh, I.S., Courtright, S.H., & Colbert, A.E. (2011). Transformational leadership and performance across criteria and levels: A meta-analytic review of 25 years of research. *Group and Organization Management*, 36, 223–270.
- Wang, X.H.F., & Howell, J.M. (2010). Exploring the dual-level effects of transformational leadership on followers. *Journal of Applied Psychology*, 95, 1134–1144.
- Ward, T.B. (2001). Creative cognition, conceptual combination, and the creative writing of Stephen R. Donaldson. *American Psychologist*, 56, 350–354.
- Wu, P.F. (2013). In search of negativity bias: An empirical study of perceived helpfulness of online reviews. *Psychology and Marketing*, 30, 971–984.
- Xin, K.R., & Pelled, L.H. (2003). Supervisor–subordinate conflict and perceptions of leadership behavior: A field study. *The Leadership Quarterly*, 14, 25–40.
- Yoshida, D.T., Sendjaya, S., Hirst, G., & Cooper, B. (2014). Does servant leadership foster creativity and innovation? A multi-level mediation study of identification and prototypicality. *Journal of Business Research*, 67, 1395–1404.
- Yukl, G. (2002). *Leadership in organizations* (5th edn). Upper Saddle River, NJ: Prentice-Hall.
- Zhang, X., & Bartol, K.M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal*, 53, 107–128.
- Zhou, J., & George, J.M. (2001). When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Academy of Management Journal*, 44, 682–696.

#### AUTHOR NOTE

Roy Y. J. Chua, Singapore Management University

Jia Hui Lim, Hong Kong Baptist University

Wannawiruch (Fon) Wiruchnipawan, CP Leadership Institute (CPLI)

Correspondence concerning this article should be addressed to Jia Hui Lim, School of Business, Hong Kong Baptist University, 34 Renfrew Road, Kowloon Tong, Hong Kong.

E-mail: [glimjh@hkbu.edu.hk](mailto:glimjh@hkbu.edu.hk)

All authors contributed equally and are listed in alphabetical order.