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Leaders' responses to creative deviance: Differential effects on subsequent creative deviance and creative performance☆

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ABSTRACT

Leaders routinely reject employees' new ideas, and some employees violate leaders' instructions in order to keep their rejected ideas alive. These incidents of creative deviance are usually examined in terms of the personal characteristics of employees and the structural properties of the work context. We introduce a third theoretical angle that focuses on the role leaders play in creative deviance. Drawing on the extant creativity, deviance, and leadership literatures, we argue that five leader responses to employee creative deviance – forgiving, rewarding, punishing, ignoring, and manipulating – exert differential influences on its consequences. Findings from a study of 226 leader–employee dyads at two advertising firms in China show that creative deviance and supportive supervision for creativity interact to influence the forgiving, rewarding, punishing, and ignoring responses. In turn, forgiving and punishing influence subsequent creative deviance, while rewarding, punishing, and manipulating influence subsequent creative performance. The study reveals that leaders' responses to creative deviance convey the joint effect of initial creative deviance and supportive supervision for creativity to subsequent creative deviance and creative performance. Implications for theory and research on workplace creativity, deviance, and leadership are discussed.

Leaders play a pivotal role in either fostering or hindering creativity in the workplace (Mainemelis, Kark, & Epitropaki, 2015; Shalley & Gilson, 2004; Tierney, 2008). In organizations that strive to increase creativity, leaders are responsible for maximizing, sequencing, and timing two distinct and often antithetical processes — variation and selective retention (Staw, 1990). While variation aims at novelty and is ultimately reflected in the number and diversity of new ideas generated by employees, selective retention aims at utility and results in a subset of new ideas that leaders evaluate as most promising and ultimately channel to implementation (Benner & Tushman, 2003; Ford, 1996; Frese, Teng, & Wijnen, 1999; Mumford, Connelly, & Gaddis, 2003). In theoretical terms, creativity is a function of high variation and high selective retention (Campbell, 1960; Simonton, 1999). In practical terms, this means that leaders must tackle the dual challenge of encouraging employees to generate new ideas and of routinely rejecting most of those ideas.

To date, creativity research has focused on the first aspect of this dual challenge but has largely overlooked the second one. Several studies have found that, in order to foster the generation of new ideas, leaders must encourage employees to be creative and they also must provide them with a supportive social context that nurtures creative engagement (for recent reviews see Anderson, Potočnik, &

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Zhou, 2014, and Mainemelis et al., 2015). However, very few studies have examined how leaders handle the relationally intense dynamics associated with the rejection of employees' new ideas. Employees may react to rejection by abandoning the rejected new idea and even by decreasing their creative engagement with future work tasks (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Zhang & Bartol, 2010). Alternatively, employees may react to rejection by increasing rather than decreasing their commitment to the rejected idea (Nemeth, 1997; Staw, 1990). Following a manager's rejection of a new idea, employees may engage in creative deviance (Mainemelis, 2010); that is, they may continue pursuing the rejected new idea in direct violation of their manager's instruction to stop working on it. Such situations trigger a set of intriguing exchanges between the manager and the creative deviant that have rarely been studied, to date. How do leaders respond to an employee who has violated orders to stop pursuing a new idea? How do leaders' responses to creative deviance, in turn, influence employees' future creative performance and future engagement in creative deviance?

The present study examines these questions by integrating insights from research on creativity, deviance, and leadership. We operationalize five leader responses to creative deviance, namely forgiving, rewarding, punishing, ignoring, and manipulating (Mainemelis, 2010). These responses are not unique to creative deviance but they represent core adaptive functions of the human evolutionary makeup across culture and time. McCullough, Kurzban, and Tabak (2013) argued that humans have an evolved cognitive system that selects and implements interpersonal strategies for deterring future harm and for preserving valuable relationships despite the prior impositions of harm. When individuals encounter deviant behavior or other forms of offense, this evolved cognitive system allows them to choose among "a suite of behavioral options" (p. 12). In this paper we operationalize an analogous 'suite' of five leader responses to creative deviance in the workplace.

The nomological model of leader responses that we test is grounded in two theoretical traditions: Deterrence theories of deviance, which focus on the effects that leaders' reactions to a deviant act have on the probability of the same deviant act recurring in the future (e.g. Klepper & Nagin, 1989; McCullough et al., 2013; Ward, Stafford, & Gray, 2006); and interactionist theories of creativity, which stress leaders' influences on employee creativity (e.g.Amabile, 1988; Ford, 1996; Woodman, Sawyer, & Griffin, 1993). These two theoretical traditions are consistent with the dual deterrence-relationship preservation focus that underlies McCullough et al.'s (2013) framework and Mainemelis's (2010) theory of creative deviance. Drawing on interactionist theories of creativity, we argue that creative deviance and supportive supervision for creativity (Madjar, Oldham, & Pratt, 2002; Oldham & Cummings, 1996) interact to influence the five leader responses. Moreover, given that creative deviance has two behavioral components—creative and deviant (Mainemelis, 2010)—we draw on detterence theories and interactionist theories to suggest that the five leader responses have differential (positive, negative, and neutral) effects on two key outcomes, employees' subsequent creative deviance and their subsequent creative performance.

Our study contributes one of the first conceptualizations and empirical tests of leaders' reactions to creative deviance. While the small extant literature on creative deviance focuses on organizational-level (e.g. Criscuolo, Salter, & Ter Wal, 2014; Mainemelis, 2010), national-level (e.g., Cullen & Parboteeah, 2014), or employee-level variables (eg. Criscuolo et al., 2014; Lin, Law, & Chen, 2012), we develop and test a model that is focused on the role leaders play in creative deviance. Furthermore, while past deviance research has focused on deviant workplace behaviors that are inherently positive or negative (Criscuolo et al., 2014; Warren, 2003), we contribute to deviance research a rigorous study of a deviant workplace behavior that is not inherently positive or negative, but rather, leaders' responses to it can make employees more or less creative and more or less creatively deviant in the future.

Last but not least, in two recent integrative reviews of the literature on the relationship between leadership and creativity, Dinh et al. (2014) urged researchers to pay more attention in the future to the dynamic nature of leader–follower interactions, and Mainemelis et al. (2015) stressed the need for new research that examines the influence of leader behaviors on employee creative performance far beyond the stage of idea generation. Our study responds to these calls and contributes to research on creativity and leadership a novel investigation of a set of leader–member interactions that ensue after a new idea has been both generated and rejected. In more general terms, our paper opens to creativity research a conceptual door for examining how leaders tackle the interpersonal exchanges associated with the dual challenge of encouraging employees to generate new ideas and of rejecting most of those ideas.

Theory and hypotheses

Creativity refers to the process that results in a novel product that the social context accepts as useful or otherwise appropriate at some point in time (Stein, 1953). This long-standing definition in the field implies that creativity must be understood both as a process and a product (Amabile, 1996; Mainemelis et al., 2015). As a process, creativity unfolds in distinct stages, such as problem preparation, idea generation, idea evaluation, idea elaboration, and idea implementation (Csikszentmihalyi, 1997). As a product, creativity is usually assessed in terms of the novelty and utility of its outcomes within a specific social domain (Amabile, 1988, 1996). Like previous research (e.g. Amabile et al., 1996; George & Zhou, 2001; Liu, Liao, & Loi, 2012), we operationalize *creative performance* as the product of an employee's work that his or her manager evaluates as both novel and useful.

Creative deviance refers to an employee's violation of a managerial order to stop pursuing a new idea (Mainemelis, 2010). This definition presupposes that the employee has already generated a new idea and has asked for a manager's permission to further develop it, but that following the manager's order to stop working on it, the employee violates that order and continues working on the new idea. Creative deviance, thus, occurs in the *idea elaboration* stage of the creative process, which follows the idea generation stage but precedes the idea implementation stage. Because the creative process is uncertain and ambiguous (Baer, 2012), creative deviance may or may not result in a creative product. However, creative deviance allows employees to further explore and pursue their rejected new idea, albeit through illegitimate means (Mainemelis, 2010).

Warren (2003) identified two organizational research steams that examine deviance as positive 'higher' conformity (e.g., wistblowing) and as harmful nonconformity (e.g., stealing). These two streams ascribe a priori to a selected class of deviant behaviors an inherent positive or negative value. Creative deviance belongs to a third and less studied class of deviant behaviors that cannot be identified a priori as inherently positive or negative (Mainemelis, 2010). Besides creative deviance, this class of deviant behaviors includes two other related constructs, counter-role behaviors and bootlegging. Counter-role behaviors are employee behaviors that are not prescribed, anticipated, or even seen as desirable by management (Staw & Boettger, 1990: 535). Bootlegging refers to "the process by which individuals take the initiative to work on ideas that have no formal organizational support and are often hidden from the sight of senior management, but are undertaken with the aim of producing innovations that will benefit the company" (Criscuolo et al., 2014: 1288).

Among the three constructs, counter-role behaviors is the broadest and creative deviance is the narrowest. Creative deviance and bootlegging are counter-role behaviors but the inverse is not always true, because most other counter-role behaviors are not related to creativity or innovation (Staw & Boettger, 1990: 537). The construct of bootlegging entails situations where individuals work secretly on new ideas without asking managerial permission or by violating managerial orders, whereas the construct of creative deviance is more narrowly focused only on situations where employees violate an explicit managerial order to stop working on a new idea. Therefore, the construct of bootlegging includes but is not limited to creative deviance. Mainemelis (2010: 575) noted that when employees explore a new idea hidden from management, sooner or later managers are likely to become aware of and possibly formally stop that activity, a fact that may trigger creative deviance at that time. Similarly, Criscuolo et al. (2014: 1290) noted that "in extreme cases, bootlegging can be seen as a form of creative deviance where individuals continue to work on projects that have been formally stopped by management." Consistent with our stated objectives, we focus on creative deviance in order to focus on the leader–follower dynamics that may ensue after leaders formally reject employees' new ideas.

Leaders' responses to creative deviance

Mainemelis (2010) suggested that leaders may respond to creative deviance by forgiving, rewarding, punishing, ignoring, or manipulating it. These responses are not unique to creative deviance but generalize to most forms of human behavior across cultures and time. McCullough et al. (2013) argued that humans have an evolved cognitive system that selects and implements interpersonal strategies for deterring future harm and for preserving valuable relationships despite the prior impositions of harm. When individuals encounter deviant behavior or other forms of offense, this evolved cognitive system allows them to choose among a 'suite' of behavioral options that includes forgiving the offender; reconciliating with him or her, often by accepting his or her point of view and by exchanging rewards; imposing costs upon the offender and even terminating the relationship with him or her; and refraining from responding to the offense (McCullough et al., 2013). Over the years, various streams of organizational research have found that leaders respond to a wide range of employee behaviors with a roughly similar 'suite' of responses, that is, by forgiving (e.g., Fehr, Gelfand, & Nag, 2010), rewarding (e.g., Podsakoff, Bommer, Podsakoff, & MacKenzie, 2006), punishing (e.g., Podsakoff et al., 2006), ignoring (e.g., Hinkin & Schriesheim, 2008a), or manipulating them (e.g., Wilson, Near, & Miller, 1996).

Rewarding generally refers to a positive response to a desired behavior, while punishing refers to a negative response to an undesired behavior (Hinkin & Schriesheim, 2008b). Ever since leader reward and punishment behaviors were introduced in organizational science in the 1970s, leaders have been conceptualized as reinforcement mediators in the administration of rewards and punishments to subordinates (Podsakoff et al., 2006; Schriesheim, Hinkin, & Tetraut, 1991), and several studies have focused on the differential effects of leader reward and punishment (for a review see Podsakoff et al., 2006). In some cases, leaders may abstain from rewarding, punishing, or otherwise responding to employees, a third leader response that Hinkin and Schriesheim (2008a) designated as omission. Omission refers to ignoring various stimuli in an employee's behavior: "it is simply the lack of any response to subordinates' needs and performance." (1235). In other cases, leaders may respond with forgiveness, the "intra-individual, prosocial change towards a perceived transgressor that is situated within a specific interpersonal context" (McCullough, Pargament, & Thoresen, 2000: 9). Forgiveness does not entail rewards or punishments, and it does not imply ignoring, condoning, forgetting, or denying the perceived harmful actions of an offender (Coyle & Enright, 1997; McCullough et al., 2013). Finally, leaders may respond to various employee behaviors by manipulating them. Manipulation has been theorized as the core aspect of Machiavellianism, "a strategy of social conduct that involves manipulating others for personal gain, often against the other's self-interest" (Wilson et al., 1996: 285). Motivated by the maximization of the leader's self-interest, the manipulating response tends to be flexibly reconfigured in order to fictitiously appear as another response, and at different times it may or it may not align temporarily with employees' interests (Wilson et al., 1996).

Drawing on past research on these generic leader responses, in the remainder of the paper we focus on them in the context of creative deviance. *Forgiving* refers to leaders cautioning creative deviants without punishing them. Forgiving comprises making clear to the employee that the rejected idea will remain rejected, and that in the future he or she should abstain from violating orders, but with an explicit remark that this nonconformity is excused because of the well-intentioned motive to develop a creative idea that could benefit the organization. Alternatively, since managers may view creative deviance as an effort to achieve a creative outcome in the work context, they may decide to *reward* it by praising the employee's superb passion for creative ideas, by commending him/her for not giving up on the idea, by signaling respect for the risk taken to protect an idea, or by providing him/her with greater autonomy and more challenging creative tasks going forward (Sutton, 2002).

Conformity to managerial orders is a basic normative expectation in most work contexts globally (Staw & Boettger, 1990; Warren, 2003). When employees violate that norm the manager may *punish* them with harsh criticism, increased monitoring, bypassing the employee for tasks that offer opportunities for creative engagement, and so forth (Podsakoff et al., 2006). A fourth possibility is

ignoring: the manager does not confront the employee or otherwise discuss the incident with her or him, nor does the manager indirectly provide a reward or a punishment (Hinkin & Schriesheim, 2008a).

A fifth option is *manipulating.* Like ignoring, manipulating does not entail reward, punishment, or forgiveness, but unlike ignoring, with the manipulating response the manager acts in a calculated manner (Wilson et al., 1996) and waits to see whether the creative deviant's unsanctioned pursuit of the new idea will result in a valuable final product (Mainemelis, 2010). If a positive outcome results, the manager can intervene at that point, and publicly recognize and legitimize the new idea so as to obtain personal benefits from the creative success of a team member. Conversely, if the illegitimate pursuit of the new idea does not result in any useful outcome, the manager can punish or ignore the creative deviance act. In either case, a core motive of manipulation is to deflect the risk of failure of the new idea from the manager, so that the creative deviant is the only person responsible for the potential failure of the new idea (Mainemelis, 2010), and to receive credit if it is successful (Liu et al., 2012).

Past research has found that managers respond to deviant behavior in a uniform and punishing manner when the organization prescribes explicit policies for sanctioning specific deviant behavior (Beyer & Trice, 1984), and when the organization punishes managers who fail to impose the prescribed sanctions (Kendal, Feldman, & Aoki, 2006). However, organizations that promote creativity are not likely to prescribe rigid penalties for employees who violate orders in order to develop new ideas (Criscuolo et al., 2014; Lehman & Ramanujam, 2009; Mainemelis, 2010). Without clear and consistent organizational prescriptions, managers are more likely to be influenced by various personal and situational factors and to respond to various acts of creative deviance with any of the five responses. Therefore, we expect that employees' creative deviance (as the behavioral stimulus) can elicit all five leader responses. We propose below that supportive supervision for creativity is a key factor that interacts with creative deviance to influence a leader's choice of response.

Interactive effects of creative deviance and supportive supervision for creativity on leaders' responses to creative deviance

Interactionist theories of creativity posit that employee creativity is influenced by the interaction between personal and contextual characteristics (Amabile, 1988; Ford, 1996; Woodman et al., 1993). Employee creativity is related more strongly to proximal contextual factors than to distal ones (Shalley, Gilson, & Blum, 2000), and leaders exert one of the most important influences on employees' perceptions of the proximal work environment (Amabile, Schatzel, Moneta, & Kramer, 2004). *Supportive supervision for creativity* refers the extent to which leaders encourage creativity by providing employees with autonomy, sufficient resources and constructive feedback, and by boosting their intrinsic motivation and positive moods (Amabile et al., 1996, 2004; Atwater & Carmeli, 2009; Madjar et al., 2002; Mumford, Scott, Gaddis, & Strange, 2002; Oldham & Cummings, 1996). In a recent meta-analysis of 42 studies that included 13 work climate dimensions, Hunter, Bedell, and Mumford (2007) found that supportive supervision has positive effects on employee creativity. Mainemelis et al. (2015) reached the same conclusion in their recent integrative literature review. Supportive supervision is an essential work-climate factor for fostering employee creativity (Shalley, Zhou, & Oldham, 2004). The leader responses examined in our study are not work-climate factors but specific behavioral reactions to a particular form of behavior (creative deviance). As such, we expect them to be influenced by the interaction between the focal behavior (creative deviance) and the leader's general degree of supportive supervision for creativity offered to his or her employees.

Individuals are more likely to forgive or reconciliate with their aggressors when they value the relationship and want to maintain it in the future (Balliet, Muelder, & Van Lange, 2011; McCullough et al., 2013). Leaders who support creativity are more eager and willing to support employees' unpopular ideas and actions in the organization (Madjar et al., 2002). Because supportive leaders are consciously involved in fostering creativity, they are more likely to realize that the motivation behind creative deviance is a byproduct of employees' high creative motivation, which leaders strive to stimulate and nurture (Mainemelis, 2010). As a result, they are more likely to either forgive or reward them. Supportive supervision has been linked to the toleration of employees' errors or unconventional actions during the creative process (Baer & Frese, 2003; Edmondson, 1999). Among the five responses, this is more likely to be associated with forgiving, whereby the leader does not reconsider his or her rejection decision, but forgives the creative deviant's act, signaling tolerance to it as well as encouragement to the employee to keep on striving for creativity.

Furthermore, McCullough et al. (2013) noted that a special case of reconciliation occurs when the individual who has suffered an aggression recognizes that the aggressor's act was in fact right or justified in some way. Because supportive leaders tend to be more open to learning about their employees' new ideas (Mainemelis & Ronson, 2006; Oldham & Cummings, 1996), they are more likely to change their minds about the value of an idea after having initially rejected it. Among the five leader responses, this reversal of decision is most likely associated with rewarding, whereby a leader reevaluates his or her earlier decision to reject a new idea, rewards the employee who has persisted with the idea against orders, and thereafter practically supports his/her efforts to carry the idea to fruition.

Because supportive leaders appreciate the creative motivation behind creative deviance, they are less likely to punish creative deviants because by doing so they may undermine their motivation for pursuing creativity. Leaders who support creativity are more likely to punish employees for inactivity or for “playing it safe” rather than for errors or rule-breaking behaviors that occur in the creative process (Sutton, 2002). Furthermore, because supportive leaders maintain open channels of feedback with their employees (Madjar et al., 2002), they are less likely to ignore creative deviance because this is likely to disrupt the reciprocal communication channel about new ideas. Supportive leaders take an active role in nurturing employee creativity (Shalley & Gilson, 2004), while ignoring is the hallmark of passive leadership (Hinkin & Schriesheim, 2008a). Because leaders who are supportive of creativity invest time and effort in building mutual trust with employees (Shalley et al., 2004), they are not likely to manipulate creative deviance either, because this is likely to severely harm the trust relationship (Dutton, 2003; McEvily, Perrone, & Zaheer, 2003).

Hypothesis 1. (*H1a–H1e*): *Creative deviance and supportive supervision for creativity interact to influence leaders' responses to creative deviance in such a way that when supportive supervision for creativity is high rather than low:*

H1a: The relationship between creative deviance and forgiving is stronger.

H1b: The relationship between creative deviance and rewarding is stronger.

H1c: The relationship between creative deviance and punishing is weaker.

H1d: The relationship between creative deviance and ignoring is weaker.

H1e: The relationship between creative deviance and manipulating is weaker.

Effects of leaders' responses on employees' subsequent creative deviance

Table 1 summarizes the theoretical mechanisms that link the five leader responses to their proposed effects on subsequent creative deviance. We ground these hypotheses on two cardinal constructs in deviance research, deterrence and access. *Deterrence* is degree to which the sanctioning of a deviant act influences the 'mental calculus' (ie. the decision making process) potential violators engage in in order to decide whether to (re)commit a deviant act (Feldman, 1984; McCullough et al., 2013; Tenbrunsel & Messick, 1999). Rational-choice theories of deviance posit that when the social context's normative gatekeepers (in our case leaders) punish a deviant act swiftly, severely, and consistently, deterrence increases, lowering in that way the future probability of the deviant act (Di Stefano, King, & Verona, 2015; Klepper & Nagin, 1989; Ward et al., 2006). Conversely, forgiving or rewarding deviant behavior lowers deterrence, as individuals perceive that they may get away without getting punished if they repeat the deviant act. *Access* (or opportunity) refers to the extent to which a normative gatekeeper's responses to a deviant act close-off, maintain, or open-up the means a violator needs in order to re-engage in the deviant act (Di Stefano et al., 2015; McCullough et al., 2013; Merton, 1968). In the case of creative deviance, access includes such factors as autonomy, time, space, resources, and workloads (Mainemelis, 2010).

Forgiving and rewarding entail the lowest degrees of deterrence. These two responses are generally motivated less by maximizing deterrence and more by preserving a valuable relationship (Karremans, Van Lange, Ouwerkerk, & Kluwer, 2003; McCullough et al., 2013). In addition, both responses are contingent to the motive of creative deviance; that is, creative deviants are forgiven or rewarded because of their well-intentioned motive to further explore a new idea that could benefit the organization. However, while rewarding is usually related to a successful result an employee has reached through creative deviance, forgiving is granted despite the absence of a successful result. Being noncontingent to outcomes, forgiving signals to employees that creative deviance can be forgiven regardless of its outcomes. Forgiving usually does not alter employees' access to means for illegitimately pursuing ideas, but it signals support for creativity and tolerance for creative deviance. This decreases the perceptual certainty that a future incident of creative deviance will be punished and weakens deterrence (Ward et al., 2006), increasing in that way the likelihood of creative deviance (Mainemelis, 2010). Rewarding as well should increase creative deviance, in part due to its low degree of deterrence, and in part because it often grants to the creative deviant greater autonomy or/and more resources to explore his/her new ideas. Put another way, among the five leader responses, rewarding is the response most likely to open-up to employees greater access to the practical means they need for reengaging in creative deviance (Merton, 1968).

Hypothesis 2. (H2): *Leaders' forgiving of creative deviance is positively associated with employees' subsequent creative deviance.*

Hypothesis 3. (H3): *Leaders' rewarding of creative deviance is positively associated with employees' subsequent creative deviance.*

Punishing is the response with the highest degree of deterrence (McCullough et al., 2013; Podsakoff et al., 2006). We note that punishment often fails to deter undesired employee behavior (Butterfield, Trevino, & Ball, 1996) because it is not severe or/and

Table 1
Theoretical links between leaders' responses to creative deviance and subsequent creative deviance and creative performance.

Leaders' responses	Effects on subsequent creative deviance				Effects on subsequent creative performance					
	Theoretical links		Hypotheses & results		Theoretical links				Hypotheses & results	
	Deterrence	Access	Hypotheses	Results	Intrapersonal resources	Relational resources	Practical resources	Legitimacy	Hypotheses	Results
Forgiving	Low	Stable	+ (H2)	+	Stronger	Stronger	Stable	Lower	+ (H5)	0
Rewarding	Low	Higher	+ (H3)	0	Stronger	Stronger	Higher	Higher	+ (H6)	+
Punishing	High	Lower	− (H4)	−	Weaker	Weaker	Lower	Lower	− (H7)	−
Ignoring	Neutral	Stable	0	0	Stable	Stable	Stable	Stable	0	0
Manipulating	Neutral	Stable	0	0	Weaker	Weaker	Stable	Stable	− (H8)	−

Notes. + indicates increase, − indicates decrease, and 0 indicates no change.

swift enough (Di Stefano et al., 2015; Klepper & Nagin, 1989; Ward et al., 2006), or/and because the work context places such a great value on creativity that managers cannot single-handedly stop creative deviance by punishing it (Mainemelis, 2010). That said, punishing is the only response that imposes negative sanctions on the creative deviant and signals that the manager will not tolerate nonconformity. In addition, punishment can be effective not only in direct ways (e.g., composing negative formal evaluations) but also in indirect ways (Podsakoff et al., 2006). Managers can effectively close-off access to the practical means creative deviants need for reengaging in creative deviance. Lowering access may involve not allocating to the employee tasks that permit creative engagement, increased close monitoring, or imposing upon the employee high workloads and extreme time pressures that do not allow him/her enough time or energy to work on his/her ideas illegitimately. By combining high deterrence and reduced access, punishing should negatively affect subsequent creative deviance.

Hypothesis 4. (H4): *Leaders' punishing of creative deviance is negatively associated with employees' subsequent creative deviance.*

Ignoring and manipulating represent leader omission behaviors (Hinkin & Schriesheim, 2008a) in the context of creative deviance. Although the two responses are qualitatively different in terms of their motives, they are functionally similar in terms of their deterrence and resulting access. Ignoring and manipulating do not entail reward, punishment, or forgiveness; do not alter employees' access to means for reengaging in creative deviance; and they do not include communication, feedback, or any other reaction that even acknowledges the creative deviance act. Past research has found that leader omission (nonresponse) to undesirable or unconventional employee behavior leaves that behavior unaffected (Hinkin & Schriesheim, 2008a; Hinkin & Schriesheim, 2008b; Petrock, 1978). Vardi and Wiener (1996) proposed that employee behaviors that violate organizational norms in an attempt to produce something valuable for the organization are more likely under conditions of identification rather than detachment or alienation. Ignoring and manipulating are unlikely to strengthen employees' identification with the leader or the unit (Amabile, Barsade, Mueller, & Staw, 2005), and the manipulating response may promote detachment or/and alienation (Liu et al., 2012; Palanski & Vogelgesang, 2011). By combining neutral deterrence and unaltered access, ignoring and manipulating should not strengthen or weaken the rate of creative deviance. Because we cannot test null effects, we do not formulate formal hypotheses for ignoring and manipulating. Rather, we state that we expect them to be unrelated to subsequent creative deviance (for a similar approach in past research please see Hinkin & Schriesheim, 2008a).

Effects of leaders' responses on employees' subsequent creative performance

Table 1 summarizes the theoretical mechanisms that link the five leader responses to their proposed effects on subsequent creative performance. We ground these hypotheses on interactionist theories of creativity, which explicate four ways through which leaders affect employee creative behavior. First, leaders affect employees' *internal psychological resources* (e.g., intrinsic motivation, vitality, thriving, psychological safety) in ways that enhance or decrease their motivation and drive to further invest in their ideas (Amabile et al., 1996; Edmondson, 1999; Kark & Carmeli, 2009). Second, through the quality of leader–employee interaction (e.g., trust, justice, communication, feedback), leaders affect the *relational resources* related to creativity (George, 2007; Zhou, 1998). Third, leaders affect employees' access to *practical resources* (e.g., time, space, seed budgets) in ways that lead them to invest more or less in developing creative ideas (Amabile et al., 1996; Mumford et al., 2002). Fourth, leaders can legitimize employees' ideas or undermine their legitimacy in the organization (Mainemelis, 2010; Mumford et al., 2002). Leaders' responses to creative deviance influence creative performance through these four theoretical mechanisms.

Forgiving strengthens employees' intrapersonal and relational resources. When managers forgive, motivations for revenge and avoidance give way to benevolent and prosocial motivations (McCullough et al., 2013), which foster creative performance (Grant & Berry, 2011). Prior research has linked forgiveness to leaders who make a genuine effort to get to know, understand, and support others in the organization (Fehr & Gelfand, 2012; Karremans, Van Lange, & Holland, 2005), and attend to employee growth and well-being (Liden, Wayne, Zhao, & Henderson, 2008). When employees fall short in their duties, forgiving is a compassionate reaction that inspires employees to realize their full potential (Huy, 2002; Liden et al., 2008; Wrzesniewski, Dutton, & Debebe, 2003). When leaders forgive creative deviants, they are likely to enrich the latter's emotional resources, help them build resilience, and encourage them to persist in pursuing new ideas. Moreover, forgiveness builds high-quality leader–employee relationships and strengthens employee trust in the leader–follower relationship (Dutton, 2003; Fehr et al., 2010), making employees more likely to take personal initiative (Baer & Frese, 2003) and personal risks in order to explore and develop new ideas (Edmondson, 1999).

Forgiveness does not imply condoning, excusing, forgetting, or denying the perceived harmful actions of an offender (Coyle & Enright, 1997; McCullough et al., 2013). When managers forgive creative deviants they reaffirm that the rejected idea shall remain rejected, a fact that likely reduces even more the idea's legitimacy in the work context (Mainemelis, 2010). Moreover, we note earlier that forgiving is not likely to be accompanied by a significant change in the creativity-related practical resources available to the employee. Theoretically, therefore, forgiving should influence creative performance through enhanced intrapersonal and relational resources, rather than through legitimacy or practical resources.

Hypothesis 5. *(H5): Leaders' forgiving of creative deviance is positively associated with employees' subsequent creative performance.*

Expected rewards hinder creativity because they have a general detrimental effect on motivation and performance (Deci, Koestner, & Ryan, 1999). When conventional performance is rewarded it decreases intrinsic motivation and creativity (Amabile et al., 1996). However, rewards for novel and unexpected performance increase intrinsic motivation and creativity (Eisenberger & Shanock, 2003). The more an activity conducted in a reward-based system becomes internalized as part of the individual's inner motives, the more it represents self-determined behavior (Deci, Eghrari, Patrick, & Leone, 1994; Deci, Ryan, & Williams, 1996) and

enhances creativity. Consequently, individuals who act in the presence of a performance-contingent reward should be more controlled by the reward and therefore produce less qualitatively creative responses compared to individuals who act in the presence of an engagement-contingent reward (Selart, Nordström, Kuvaas, & Takemura, 2008). When leaders reward creative deviance, they are rewarding an unconventional and unexpected behavior, not only because of its outcomes, but also because of its underlying creative motivation. This should strengthen employees' intrinsic motivation and creative performance. Moreover, rewarding evokes pleasant/high activation emotions, which encourage employees to pursue their dreams (Huy, 2002) and stimulate cognitive variation, the main cognitive 'muscle' of creativity (Amabile et al., 2005).

Rewarding is also likely to influence the employee's perception that the leader is trustworthy, which strengthens the employee's creative engagement and increases his/her creative performance (Janssen, 2005). In addition, rewards strengthen the leader–employee interactions, enabling the leader and the employee to communicate better. This further enhances leaders' ability to provide feedback, the employee's perspective-seeking behavior, and leader–employee mutuality in raising and sharing ideas, all of which lead to higher creative performance (Grant & Berry, 2011; Mainemelis et al., 2015). Rewarding is likely to contribute practical resources as well. When a leader rewards an act of creative deviance he/she often increases the employee's tangible resources such as time, space, and funding, which enable the employee to attain higher levels of creative performance (Amabile et al., 1996; Mumford et al., 2002). Last but not least, rewarding usually legitimizes the previously rejected new idea. This allows the employee to legitimately develop the idea out in the open while also attaining further feedback (Mainemelis, 2010). This is likely to result in higher levels of employee creative performance (Zhou, 1998).

Hypothesis 6. (H6): *Leaders' rewarding of creative deviance is positively associated with employees' subsequent creative performance.*

Punishment further undermines the legitimacy of a rejected new idea and is likely to also reduce employees' practical resources for pursuing creativity. With fewer resources, lower legitimacy, and lack of supervisory support, employees' creative performance is quite likely to suffer. Moreover, punishment is a form of control that has detrimental effects on employees' emotional resources (Oldham & Cummings, 1996). While punishment may be focused on the violation of orders, the employee may experience it as an impediment to his/her attempt to be creative. Creativity is related to positive emotions such as passion and vitality (Amabile et al., 2005; Dutton, 2003; Kark & Van Dijk, 2007) which punishment rapidly diminishes. Moreover, when leaders respond in a punishing manner they frame the situation for employees as a 'loss' or 'no-loss' situation. This type of framing is consistent with a prevention mode of self-regulation (Brockner & Higgins, 2001). According to self-regulatory focus theory, self-regulation via a prevention focus regulates security needs, enhances avoidance tendencies (Higgins, 1997; Scholer & Higgins, 2010), and reduces employees' creative behaviors (Kark & Van Dijk, 2007; Lanaj, Chang, & Johnson, 2012). Punishment hinders relational resources as well. Punishment is likely to trigger a negative leader–employee interaction, lower employees' sense of trust, and limit communication and constructive feedback, decreasing employees' creative performance (Amabile et al., 1996; Zhang & Bartol, 2010).

Hypothesis 7. (H7): *Leaders' punishing of creative deviance is negatively associated with employees' subsequent creative performance.*

Ignoring does not affect the legitimacy of the rejected new idea and does not alter one's practical resources for pursuing creativity. Ignoring does not alter employees' relational resources either, at least in short time periods, because it is not confrontational or tenuous (Butterfield et al., 1996). Employees may experience mild frustration or mild relief that their manager does not react to their creative deviance, but in and of itself this is not likely to significantly affect their creative performance (cf. Hinkin & Schriesheim, 2008a; Hinkin & Schriesheim, 2008b; Petrock, 1978). Again, we do not formulate a formal hypothesis for ignoring, but we state that we expect it to be unrelated to creative performance.

Manipulating as well does not alter the legitimacy of the new idea or the practical resources available to employees. However, manipulating is a calculated response that hinders employees' intrapersonal and relational resources. Due to their unpredictable, inconsistent, and instrumental nature, manipulative responses can be experienced by employees as highly controlling, which prompts employee resentment. Owing to it opportunistic and instrumental tone, manipulation depletes employees' relational resources. Followers' trust in a manipulative leader should be lowest in comparison to all other leader responses to creative deviance (cf. Wilson et al., 1996). Lack of trust undermines followers' sense of psychological safety (Edmondson, 1999; Palanski & Vogelgesang, 2011), which is a reliable predictor of employees' ability to act in a creative manner (Baer & Frese, 2003; Edmondson, 2003; Kark & Carmeli, 2009). Manipulation is experienced by employees as a form of abusive supervision (Tepper et al., 2009) and makes employees feel that, even if they manage to create a winning creative product, the leader will likely claim the glory for it (Liu et al., 2012). This poses an ongoing negative cognitive distraction in the creative process, as employees constantly watch over the backs so that the manipulating leader does not hurt them. Past research has found that exposure to abusive supervision reduces intrinsic motivation, results in subordinates' unwillingness to 'go the extra mile' to perform behaviors that benefit the organization, and harms knowledge sharing (McEvily et al., 2003) and ultimately employee creative performance (Liu et al., 2012).

Hypothesis 8. (H8): *Leaders' manipulating of creative deviance is negatively associated with employees' subsequent creative performance.*

Conditional indirect joint effects of creative deviance and supportive supervision for creativity on subsequent creative deviance and creative performance

In summary, like previous research (e.g. Criscuolo et al., 2014; Mainemelis, 2010), we view creative deviance as a risky, uncertain, and ambiguous behavior that may or may not lead to subsequent creative deviance and creative performance. Integrating our earlier

arguments and hypotheses, which are shown in Table 1, we propose that leaders' responses to creative deviance channel, in different ways, the indirect effects of the interaction between creative deviance and supportive supervision for creativity to subsequent creative deviance and creative performance.

Hypothesis 9. *: The joint effect of supportive supervision for creativity and creative deviance indirectly influences employees' subsequent:*

H9a: Creative deviance through forgiving, rewarding, and punishing; and.

H9b: Creative performance through forgiving, rewarding, punishing, and manipulating.

Methods

Prior to developing the leaders' responses to creative deviance scales, we conducted semi-structured interviews with 14 managers, 12 employees, and two human resource management directors in two advertising firms (Firms 1 and 2) in Shenzhen, a large city in southern China. The interviews provided us with rich information about how leaders respond to employees' creative deviance, and how employees behave in turn after different leader responses. After distilling these qualitative insights, we conducted a scale validation study (preliminary study) and then a hypothesis-testing study (main study) in three other advertising firms (Firms 3, 4, 5) in China through Internet-based surveys.

Preliminary study

To measure leaders' responses, we adopted items form previously validated scales and also developed new items. For the punishing scale we adopted five items from the Leader Reward and Punishment Questionnaire (LRPQ) (Podsakoff, Todor, Grover, & Huber, 1984) and composed six additional items. For the rewarding scale we adopted four items from the LRPQ and composed four additional items. For the ignoring scale we adopted three items from the Omission scales of the Multifactor Leadership Questionnaire (MLQ) (Hinkin & Schriesheim, 2008b) and composed three additional items. The scales of forgiving and manipulating consisted each of five items written for this study.

We pre-tested the structural validity of the initial pool of 35 items in a sample of 159 ad designers in an advertising firm in Shenzhen (Firm 3). Because the original items were in English, we followed the back-translation procedure (Brislin, 1986) to translate them into Chinese. Respondents were asked to respond to a 7-point Likert-type scale, anchored from 1 (strongly disagree) to 7 (strongly agree), about their leaders' responses to their creative deviance in the past two months.

We conducted an exploratory factor analysis (EFA) using principal components and a cutoff criterion of .40 for factor loadings. Four items with low loadings and high cross-loadings were eliminated. A five-factor structure emerged explaining 63.93% of the variance, with an Eigenvalue of 4.42. Factors 1 and 2, representing punishing and rewarding, with eight items loaded on each factor, and factors 3, 4, and 5, indicating ignoring, forgiving, and manipulating, with five items loaded on each factor. All factor loadings were larger than .75. We then performed a series of confirmatory factor analyses (CFA) using Mplus 7.0. A good fit was found for the five-factor model ($\chi^2 = 779.18$, $df = 424$; CFI = .95; TLI = .94; RMSEA = .06), with all 31 items loading strongly on their expected factors. The final five scales with the 31 items appear in the Appendix.

Main study

We collected three-wave multi-source data in two advertising firms (Firms 4 and 5) in Guangzhou, the capital city of Guangdong, China. The two companies had a similar business structure. All participants had similar work tasks, such as graphic design and brand advertising, and all were at the same hierarchical level. Their work involved conceiving and developing various advertising designs and advertising plans, which they submitted to their supervisors. These employees commonly experienced their immediate supervisors' rejection of their designs. A core responsibility of the supervisors (besides overseeing the work of these employees) was to select what they considered to be the best of their designs to be presented to the firms' clients.

We used an online survey system to build panels with embedded information so as to match participants' data when the questionnaires were anonymous. Each participant received an email with a link to the questionnaire. Data were collected in three waves. At Time 1 (t1), online questionnaires including creative deviance, supportive supervision for creativity, and demographic questions, were distributed to 343 employees who had been working in the organization for at least one month. We received 327 valid responses (95.3%). Two months later, we conducted the Time 2 survey (t2) for these 327 employees with the questionnaire with the five leaders' responses scales. We received 257 valid responses (78.6%) in this wave. All variables collected at t1 and t2 were self-reported. Time 3 survey (t3) was conducted two months after t2 with these 257 employees who rated their creative deviance at t3, and with their immediate supervisors (total 169) who rated their subordinates' creative performance over the previous two months. Each supervisor rated one or two subordinates. We received 226 matched data sets (65.9%) across three waves of surveys. The average supervisor–subordinate relationship length was 274.42 days (s.d. = 90.87). Subordinates' average age was 28.27 years (s.d. = 4.71); 171 subordinates were male (75.7% of the matched data sample). We did not find any significant difference between the final sample (n = 226) and the target sample (n = 343) in terms of gender, age, tenure, and education.

Measures

All items in our questionnaires were rated on a 7-point scale ranging from 1 (strongly disagree strongly) to 7 (strongly agree).

Creative deviance

We measured creative deviance with the Chinese scale of Lin, Law, and Chen (2012), consisting of nine items (in English in the Appendix). This scale has shown acceptable levels of reliability ($\alpha = .81$ in Lin, Law, & Chen, 2012, and $\alpha = .84$ in Lin, Wong, & Fu, 2012). We asked employees to rate the items about their creative deviance in the past two months. The instructions made clear that the items refer to one or more of their ideas that were rejected by their immediate supervisor. Cronbach's α at the individual level was .82 at t1 and .88 at t3.

Supportive supervision for creativity

We adopted 4 items from Madjar et al. (2002) to measure supportive supervision for creativity. A sample item was "My supervisor gives me useful feedback about my ideas concerning the work." Cronbach's α was .84.

Leaders' responses to creative deviance

We used the 31-item scale validated in our preliminary study to measure employees' perceptions of leaders' responses to creative deviance. The items are shown in the Appendix. In the main study, Cronbach's α were .73 for the forgiving scale, .78 for the rewarding scale, .86 for punishing, .91 for ignoring, and .81 for the manipulating scale.

Creative performance

We asked supervisors to rate their subordinates' creative performance using George and Zhou's (2001) 13-item scale. A sample item was "Suggests new ways to achieve goals or objectives". For this scale Cronbach's α was .95.

Control variables

We collected data on participants' age, gender, education, and years employed at the organization. In addition, because Lin, Law and Chen (2012) found that *intrinsic motivation* and *creative self-efficacy towards rejected ideas* are antecedents of creative deviance, we controlled for these two variables in our study to rule out that alternative factors bring about creative deviance at t3. We adapted Tierney, Farmer, and Graen's (1999) 5-item Intrinsic Motivation scale in this study. The target in each item was rephrased to the "rejected ideas". A sample item was, "I enjoy finding solutions for the new ideas rejected by my supervisor." Cronbach's alpha of this scale was .85. We measured employees' creative self-efficacy towards rejected ideas with Houghton and DiLiello's (2010) 6-item scale. Again, we rephrased the target to rejected ideas in each item. A sample item was, "I feel that I can work out some rejected ideas." Cronbach's alpha for this measure was .92.

Analysis strategy

Because our model included five conditional indirect effect paths, we conducted full model testing using path-analytic methods. Full model testing can simultaneously estimate total indirect effect and specific indirect effect through one mediator in the context of a multiple indirect path model. Path analytic methods have displayed the greatest statistical performance among various approaches of testing multiple conditional indirect path models (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Shrout & Bolger, 2002). We analyzed our data using Mplus 7.0 (Muthén & Muthén, 2007) because it accommodates all of the above analytical methods in one program (cf. Bamberger, 2008; Graves, Ruderman, Ohlott, & Weber, 2012). Considering that the Sobel test provides a more direct examination on an indirect effect, we tested the indirect effects of the five mediators using Preacher and Hayes's (2004) SPSS macro program to examine the indirect effects.

Our analysis consisted of three steps. First, we conducted EFA and CFA to examine the factorial structure of the measured constructs. We assessed the model fit using Hu and Bentler's (1999) two-index presentation strategy, with the following cutoff values: values greater than .90 for the comparative fit index (CFI) and Tucker–Lewis indices (TLI); .06 or below for the root mean squared error of approximation (RMSEA); and .08 or below for the standardized root mean square residual (SRMR). Second, we centered all variables prior to full model testing and used the maximum-likelihood algorithm with robust standard errors to derive parameter estimates. Third, we used the Mplus function and SPSS macro program to examine the hypotheses.

Results

Preliminary analysis

We conducted three preliminary analyses prior to testing our hypotheses. First, we compared the means and standard deviations of all variables from all respondents from the two companies and found no significant differences. Therefore, we combined the data from all respondents from the two companies in our subsequent analyses. The means, standard deviations, correlations, and reliabilities of the variables of the combined sample are presented in Table 2.

Second, given that each supervisor in our sample rated the creative performance of one or two employees, we examined supervisory ratings for non-independence. One-way random analysis of variance of creative performance showed that the variances in

Table 2
Descriptive statistics and bivariate correlations[a].

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender[b]	1.24	.43	–														
2. Age	28.27	4.71	.07	–													
3. Education[c]	3.49	.65	.13	−.12	–												
4. Tenure	4.21	1.10	.04	.39**	−.17*	–											
5. Intrinsic motivation	5.33	1.17	.10	.02	−.08	.12*	(.85)										
6. Creative self-efficacy	5.42	.97	−.09	−.07	.10	.16*	.68**	(.92)									
7. Creative deviance (t1)	4.88	1.11	−.04	.01	.17**	.12*	.31**	.26**	(.82)								
8. Supportive supervision for creativity	4.34	.93	−.07	−.14*	.14*	−.13*	.20**	.34**	.15*	(.84)							
9. Forgiving	4.30	.77	−.08	.06	.02	.05	.27**	.32**	.30**	.17*	(.73)						
10. Rewarding	4.46	1.08	−.06	.03	−.02	.04	.32**	.41**	.36**	.16**	.18*	(.78)					
11. Punishing	3.81	.84	−.12	−.06	−.01	−.00	−.24**	−.33**	.12*	−.06	.07	−.10†	(.86)				
12. Ignoring	4.74	.99	.09	.02	.02	−.08	.17*	.10	.18**	−.03	.12*	−.07	.11†	(.91)			
13. Manipulating	4.66	1.01	−.13	−.16	.18*	−.22**	.18*	−.14*	.27**	.15*	.08	.13*	.14*	.06	(.81)		
14. Creative deviance (t3)	4.90	1.18	−.07	−.01	.00	.06	.29**	.20**	.55**	.17*	.22**	.12*	−.18*	.11†	.19**	(.88)	
15. Creative performance	4.38	1.22	.08	.04	.05	−.07	.21**	.17*	.11†	.14*	.16*	.20**	−.12*	.10	.14*	.12*	(.95)

Notes. Values on the diagonial in parentheses represent the coefficient alpha reliabilities.
† $.05 < p < .1$.
* $p < .05$.
** $p < .01$.
[a] N = 226.
[b] Dummy-coded: 1 for male, 2 for female.
[c] Dummy-coded: 1 for primary school, 2 for high school, 3 for college certificate degree, 4 for Bachelor, 5 for Master, 6 for Doctoral degree.

supervisor-level means $F(168, 225) = 1.43$, $p = .15$ were not significant. The intraclass correlation coefficient, or ICC(1), was .03. The ICC(2) value of creative performance was .35, which was lower than the conventional criterion value .70 for aggregation. Therefore, there were marginal variances in creative performance that were related to supervisors, warranting the use of single-level modeling for analyzing the current data.

Third, we conducted CFA to examine the discriminant validity of the five leader response scales and other variables in our model, including creative deviance, creative performance, and supportive supervision for creativity. We parceled the items to form three indicators for each construct since our sample size was moderate (n = 226). We first averaged the highest and lowest loadings to establish the first indicator, and then averaged the next highest and then the lowest loadings to establish the second indicator, until all items were assigned to one of the indicators (Mathieu & Farr, 1991). Because creative deviance was measured at t1 and t3, data from the two time points represented one factor. We thus hypothesized an eight-factor model for CFA to accommodate all nine variables. Using chi-square difference tests, we compared the fit of alternative nested models, ranging from the hypothesized eight-factor model to the single-factor model.

The hypothesized eight-factor model treated each construct as distinct. First, to validate the distinctiveness of creative performance and the five leader responses, we combined creative performance and each leader's response scale to build seven-factor models, and compared each seven-factor model to the eight-factor model. Second, we combined creative deviance and creative performance into a seven-factor model and compared this with the eight-factor model. In the third step, we combined supportive supervision for creativity with either leader rewarding or leader forgiving. In so doing, we differentiated supportive supervision for creativity from these two leader responses. Finally, we combined all eight constructs in a one-factor model. As Table 3 shows, the hypothesized eight-factor model has a good fit ($\chi^2 = 427.54$; $df = 271$; CFI = .94; TLI = .92; RMSEA = .05; SRMR = .06). Significant chi-square changes suggest that the eight-factor model is better than any other model. In addition, although all supervisors rated one or two subordinates' creative performance, the shared variance generated by the supervisor responding to questions about their subordinates was also addressed via CFA. Finally, all indicators of the latent constructs showed convergent validity, as indicated by their average variance extracted (.72) greater than .50 and composite reliability (.87) greater than .70 (Fornell & Larcker, 1981). In summary, the CFA results supported the expected factorial structure of the leader responses.

Hypotheses tests

Hypotheses 1a–1e propose joint effects of creative deviance and supportive supervision for creativity on the five leader responses. We derived path coefficients for our model through a series of regressions, as shown in Table 4. After including control variables, we respectively regressed each leaders' response on t1 creative deviance, supportive supervision for creativity, and their interaction term

Table 3
Model fit summary for confirmatory factor analyses[a].

	χ^2	df	$\Delta\chi^{2b}$	CFI	TLI	RMSEA	SRMR
8 factors	427.54	271		.937	.918	.054	.060
7 factors (creative deviance & creative performance combined)	533.83	278	106.29***	.881	.861	.068	.075
7 factors (creative performance & rewarding combined)	799.63	278	372.09***	.758	.717	.098	.100
7 factors (creative performance & punishing combined)	799.00	278	371.46***	.759	.718	.098	.099
7 factors (creative performance & ignoring combined)	791.53	278	363.99***	.762	.722	.097	.098
7 factors (creative performance & forgiving combined)	789.47	278	361.93***	.763	.723	.097	.096
7 factors (creative performance & manipulation combined)	790.00	278	362.46***	.763	.723	.097	.095
7 factors (supportive supervision for creativity & rewarding combined)	563.80	278	136.26***	.868	.845	.072	.076
7 factors (supportive supervision for creativity & forgiving combined)	665.80	278	238.26***	.820	.790	.084	.098
1 factor (all variables combined)	1938.96	299	1511.42***	.240	.174	.167	.170

Notes: CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual.
[a] n = 226.
[b] Chi-square difference was compared between the eight-factor model and the other models.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

(Table 4). We found significant effects of the interaction term on rewarding ($b = .25$, $p < .01$), forgiving ($b = .10$, $p < .05$), ignoring ($b = -.11$, $p < .05$), and punishing ($b = -.44$, $p < .01$), but insignificant/marginal effect on manipulating ($b = .08$, $p = .067$).

Fig. 1 shows the standardized path coefficients of the hypothesized paths in the full model testing through the Mplus program. Controlling for age, education, gender, organization tenure, intrinsic motivation, and creative self-efficacy in full model testing, the interaction term of creative deviance and supportive supervision for creativity at t1 was positively related to forgiving ($\beta = .14$, $p < .05$) and rewarding ($\beta = .25$, $p < .01$) at t2. Fig. 2 shows that the relationships between creative deviance and forgiving, and between creative deviance and rewarding, were stronger under high rather than low supportive supervision for creativity. Therefore, Hypotheses 1a and 1b were supported.

As shown in Fig. 1, the paths from the interaction term of supportive supervision and creative deviance to punishing and ignoring were statistically significant (for punishing $\beta = -.46$, $p < .01$, and for ignoring $\beta = -.15$, $p < .05$). The interactions graphs, shown in Fig. 2, indicate that the relationship between creative deviance and punishing was weaker under high rather than low levels of supportive supervision. Similarly, the relationship between creative deviance and ignoring was weaker under high levels of supportive supervision. Hence, Hypotheses 1c and 1d were supported. Finally, the joint effect of creative deviance and supportive supervision for creativity on manipulating was not significant ($\beta = -.10$, $p = .12$). Therefore, Hypothesis 1e was not supported.

Hypotheses 2 to 4 propose effects of leaders' responses on subsequent creative deviance. As shown in Fig. 1, the path from forgiving to subsequent creative deviance was significant ($\beta = .11$, $p < .05$), the path from rewarding to subsequent creative deviance was not significant, and the path from punishing to subsequent creative deviance was significant ($\beta = -.11$, $p < .05$). Therefore, Hypotheses 2

Table 4
Results of hierarchical multiple regression.

	Forgiving			Rewarding			Punishing			Ignoring			Manipulating		
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15
Control variable															
Gender	.04	.04	.04	−.02	−.03	−.00	−.00	−.01	−.04	.14*	.13*	.12*	.05	.05	.04
Age	−.12	−.09	−.10	.06	.08	.06	.07	.07	.12	.14*	.15*	.16*	−.05	−.05	−.04
Education	−.02	.00	−.01	.00	.02	.01	.02	.03	.06	.01	.02	.03	.01	.02	.03
Tenure	.15†	.12	.14†	−.04	−.07	−.02	.18†	.20*	.11	−.03	−.02	−.05	.12	.13†	.11†
Independent variable															
CD (t1)		.28***	.26***		.31	.24		.06	.18**		.12**	.15**		.17***	.19***
SS		.10*	.09*		.10	.09		.24***	.25***		.21***	.22***		.31***	.31***
Interaction term															
CD(t1) × SS			.10*			.25***			−.44***			−.11*			−.08†
Total R^2	.01	.10	.11	.00	.10	.15	.05	.09	.20	.06	.14	.15	.02	.19	.20
ΔR^2	.01	.09***	.01*	.00	.10***	.05***	.05***	.05***	.11***	.06***	.08***	.01*	.02*	.17***	.01†
ΔF	1.37	25.58***	4.73*	.15	28.35***	16.67***	6.00***	12.60***	64.51***	7.50***	23.43***	6.17*	2.46*	52.60***	3.37†

Note. N = 226.
CD = creative deviance.
SS = supportive supervision for creativity.
† $p < .10$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

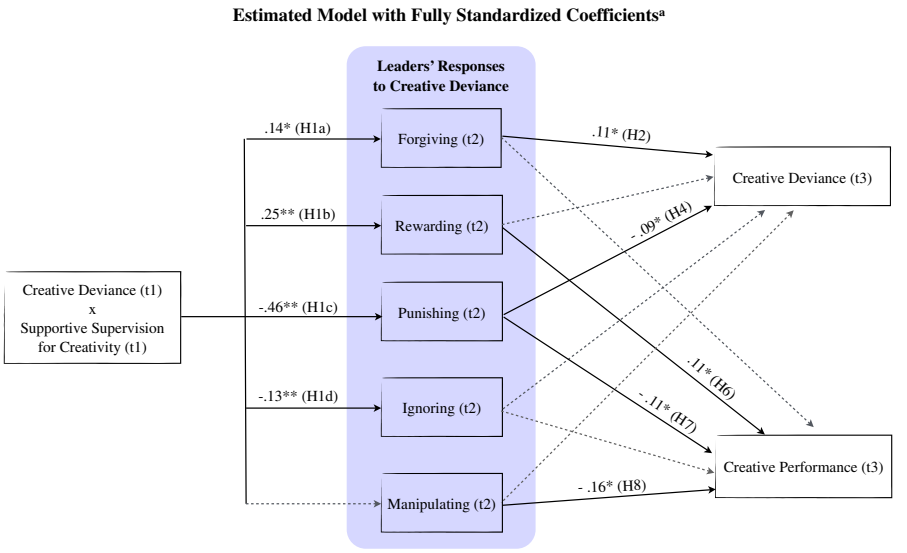

Fig. 1. Estimated model with fully standardized coefficients *Notes.* t2 = t1 + 2 months. t3 = t2 + 2 months. Creative performance was rated by supervisors, all other variables were rated by employees. Solid line paths indicate correlation coefficients that are significant ($p < .05$). Dashed line paths indicate correlation coefficients that are not significant ($p > .1$). $^{*}p < .05$; $^{**}p < .01$. Some slight differences in the estimate values shown in Table 4 and Fig. 1 are due to differences in the statistical tools used (SPSS and Mplus, respectively) and do not affect the pattern of findings. [a]n = 226.

and 4 were supported, while Hypothesis 3 was not supported. In addition, consistent to our expectations, the results showed null effects for the relationships between ignoring and subsequent creative deviance, and between manipulating and subsequent creative deviance.

Hypotheses 5 to 8 propose effects of leaders' responses on subsequent creative performance. As shown in Fig. 1, the path from forgiving to subsequent creative performance was not significant, the path from rewarding to subsequent creative performance was significant ($\beta = .11$, $p < .05$), the path from punishing to subsequent creative performance was significant ($\beta = -.09$, $p < .05$), and the path from manipulating to subsequent creative performance was significant ($\beta = -.16$, $p < .01$). Therefore, Hypotheses 6, 7, and 8 were supported, while Hypothesis 5 was not supported. In addition, consistent to our expectations, the results showed null effects for the relationship between ignoring and subsequent creative performance. Table 1 summarizes the results for Hypotheses 2 to 8.

Hypothesis 9a states that forgiving, rewarding, and punishing at t2 translate the joint effect of creative deviance and supportive supervision at t1 into creative deviance at t3. As shown in Table 5, the joint effect of creative deviance and supportive supervision at t1 on creative deviance at t3 was conveyed by forgiving ($z = 1.66$, $p < .05$) and punishing ($z = 1.66$, $p < .05$), rather than rewarding, ignoring, and manipulating. Hypothesis 9a was thus supported for two of the three hypothesized indirect effects. Hypothesis 9b states that forgiving, rewarding, punishing, and manipulating at t2 convey the joint effect of creative deviance and supportive supervision at t1 into creative performance at t3. The test of Hypothesis 9b is similar to the procedure of testing Hypothesis 9a. As shown in Table 5, the interactive effect of creative deviance and supportive supervision at t1 on creative performance at t3 was conveyed by rewarding ($z = 2.54$, $p < .05$), punishing ($z = 2.23$, $p < .05$) and manipulating ($z = 1.64$, $p < .05$), rather than ignoring or forgiving. Therefore, Hypothesis 9b were supported for three of the four hypothesized indirect effects.

Discussion

Consistent with our hypotheses, the interaction between creative deviance and supportive supervision for creativity was related positively to forgiving and rewarding, and negatively to punishing and ignoring creative deviance. Contrary to our expectations, the interaction term was not related to the manipulating response. One explanation for this finding is that manipulation is the most ambiguous and tentative leader response. Given that manipulation is a strategically flexible response that at times involves supportive behaviors and at other times uncooperative behaviors (Wilson et al., 1996), it may be influenced more and more directly by the leader's underlying self-interested motives. The degree of uncertainty, ambiguity, and lack of clarity, with regards to manipulation (Carson, Madhok, & Wu, 2006), can possibly lead to mixed responses on behalf of the employees, which will not enable us to find the expected relationships. Future research should further investigate this possibility.

Consistent to our expectations, subsequent creative deviance was related positively to forgiving, negatively to punishing, and it was not related to ignoring and manipulating. Contrary to our expectation, rewarding did not influence subsequent creative deviance. An explanation for this finding is that in the post-rewarding period creative deviants' levels of legitimacy, leader support, and access to practical means for pursuing new ideas are such that they do not need to resort to higher levels of creative deviance, but they still face rejection which, in turn, triggers similar levels of creative deviance. For example, Mainemelis and Epitropaki (2013) studied a film director who engaged in creative deviance during the making of a film; as a result of the success of that film he enjoyed greater

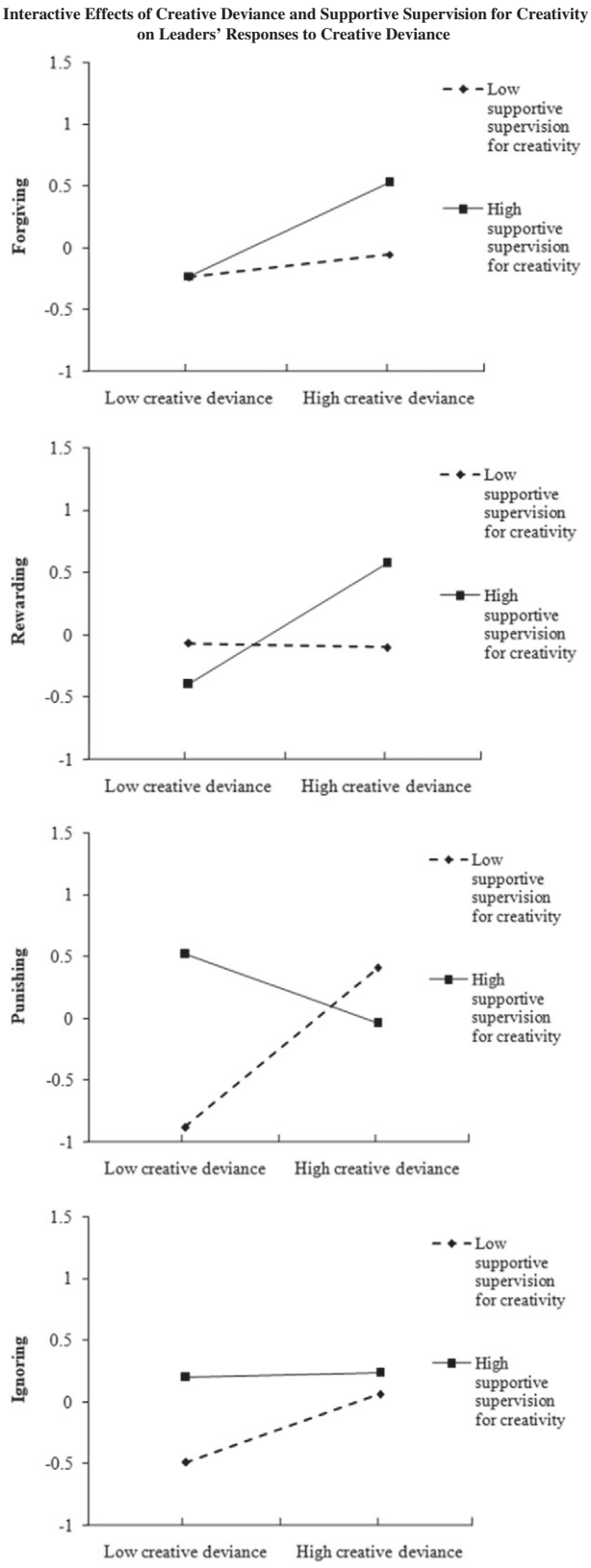

Fig. 2. Interactive effects of creative deviance and supportive supervision for creativity on leaders' responses to creative deviance. *Notes.* Low and high supportive supervision and creative deviance at + 1.0 and − 1.0 standard deviation from the mean, respectively. All variables are centered.

Table 5
Results of Sobel Test of the indirect effects on creative deviance and creative performance.

	Interaction term → mediator		Mediator → creative deviance (t3)		Sobel Test	
	a	SE_a	*b*	SE_b	*z*	*p*
Mediator						
Forgiving	.10	.047	.10	.038	1.655	0.041
Rewarding	.25	.046	.03	.037	0.649	0.667
Punishing	−.44	.049	−.08	.032	1.656	0.040
Ignoring	−.11	.044	−.03	.040	0.662	0.782
Manipulating	−.08	.042	−.08	.045	1.300	0.107
Mediator						
Forgiving	.10	.047	.02	.054	0.415	0.461
Rewarding	.25	.046	.13	.053	2.542	0.012
Punishing	−.44	.054	−.10	.046	2.234	0.034
Ignoring	−.11	.044	.06	.057	−1.113	0.201
Manipulating	−.08	.042	−.16	.045	1.641	0.047

Notes. N = 226.
Interaction term = creative deviance (t1) × supportive supervision for creativity.
The mediators (forgiving, rewarding, punishing, ignoring, and manipulating) and the moderator (supportive supervision for creativity) were centered prior to analysis.

creative freedom during the making of the film's sequel; but the increased creative freedom did not suffice to completely shield his future ideas from rejection and resistance. From the interviews conducted in our study we found that the rewarded creative deviants eventually had to go back to the drawing board, generate other new ideas, propose them to their managers, and often encounter once again the latter's rejection.

Consistent to our expectations, subsequent creative performance was related positively to rewarding and negatively to punishing and manipulating. Contrary to our expectation, forgiving did not influence subsequent creative performance. Past research has suggested that, although intra-personal and inter-personal psychological resources play an important role in creative performance, the latter also requires access to practical resources and legitimacy for one's new ideas (e.g. Amabile et al., 1996; Mainemelis, 2010; Mumford et al., 2002). An explanation for our finding that forgiving did not influence subsequent creative performance is that the creative deviants' enhanced motivational, emotional, and relational resources in the post-forgiving period do not suffice to produce a short-term increase in his/her creative performance when the legitimacy of their ideas has been reduced and the practical means for pursuing their new ideas have remained unaffected. Note, however, that forgiving increases future creative deviance, which implies that forgiving positively supports an employee's creative motivation, which in turn may contribute indirectly to his/her creative performance in time-frames much longer than the ones employed in our study. Future research should investigate this possibility by measuring the effects of forgiving on creative performance over long periods of time.

We found general support for the hypothesis that leaders' responses to creative deviance at t2 translate the joint effect of creative deviance and supportive supervision for creative deviance at t1 to creative deviance and creative performance at t3. The joint effect to subsequent creative deviance was conveyed by forgiving and punishing (rather than rewarding, ignoring, and manipulating), while the joint effect to creative performance was conveyed by rewarding, punishing, and manipulating (rather than forgiving and ignoring). These results support our overarching argument that leaders' responses to creative deviance have significant and differential effects on its future consequences.

Theoretical contributions

To the best of our knowledge, this study contributes one of first conceptualizations and empirical test of leaders' role in creative deviance. We also extend theoretically the concept by showing that while macro-contextual elements, such as the organization's structural strain, its general normative enforcement (Mainemelis, 2010), and its formalization (Criscuolo et al., 2014) may influence the overall rate of creative deviance in the work context (Mainemelis, 2010), leaders' reactions to creative deviance play an important role in influencing its effects on the subsequent creative deviance and creative performance of individual employees. Our study also sheds light on the specific differential effects of five leader responses to creative deviance. In doing so, it stresses how sensitive and complex the leader's role is in managing creativity at work.

By encouraging creativity, leaders may be unintentionally inviting creative deviance and dissent (Criscuolo et al., 2014; Mainemelis, 2010; Nemeth, 1997; Staw, 1990); and by rejecting some new ideas, so as to maximize selective retention and ultimately creativity in the work context, they may be unintentionally hindering employees' creative engagement (Amabile et al., 2005; Zhang & Bartol, 2010). Our study empirically captures how a leader's response to creative deviance can exert significant influence in making the employee more or less creative and more or less creatively deviant. Ideally, a manager would want employees to be more creative without engaging in creative deviance, or/and to engage in creative deviance insofar as the latter contributes to

their creative performance. Our study offers a compelling illustration of how difficult such a combination of outcomes may be to achieve.

In their framework of the 'suite' of alternative behavioral responses to deviant or otherwise provocative behavior, McCullough et al. (2013) argued that individuals engage in a complex mental calculus about the cost and benefits of each option in order to estimate the expected future value of deviance and the expected future value of the relationship. Our study sheds light on how difficult and often unreliable this mental calculus can be in the context of leader responses to creative deviance. Taken together, our findings suggest that leaders who manipulate creative deviance so as to extract a personal benefit from an employee's potential creative outcomes end up hindering his/her creative performance without reducing his/her creative deviance; managers who choose to ignore creative deviance, so that nothing happens in the aftermath of a creative deviance incident, end up promoting the sort of behavior where little or nothing changes both in terms of creative performance and creative deviance; and managers who attempt to extinguish creative deviance by punishing it may succeed in reducing it, but in doing so they also reduce employees' creative performance. Sutton (2002) argued that leaders who strongly support creativity are more likely to punish employees not for 'breaking the rules' but for remaining inactive and for not taking risks in order to explore new ideas. Lending support to this assertion, our findings reveal that when supportive supervision for creativity is low, the likelihood of punishment is higher when creative deviance is high, but when supportive supervision for creativity is high, the likelihood of punishment is higher when creative deviance is low (Fig. 2).

Rewarding creative deviance results in a more desirable combination of outcomes but has an obvious limit: Leaders cannot reward all creative deviance acts in the work context. Forgiving was not related to creative performance, but it was positively associated with subsequent creative deviance. This suggests that forgiveness strengthens nonconforming creative engagement and that the latter does not lead directly to higher creative performance. In our study, creative deviance led to higher levels of employee creative performance only when it was rewarded by a leader who was highly supportive of employees' creative pursuits.

Leaders who support creativity are not leaders who always accept and never reject employees' new ideas. Such a leader behavior is highly unlikely in the vast majority of organizational contexts, and in theoretical terms it is highly ineffective for it maximizes variation without also maximizing selective retention (Benner & Tushman, 2003; Ford, 1996; Frese et al., 1999; Mainemelis, 2010). In addition, invariably abstaining from rejecting ideas may cast doubts over the leader's evaluative ability in selecting and filtering new ideas (Mumford et al., 2002; Mumford et al., 2003), which can be self-defeating because followers' perceptions of supportive leadership are related to leader behaviors that signal intellectual and technical competence (Amabile et al., 2004). Our study shows that employees may perceive a leader as supportive even after the leader has rejected their new idea. Overall, our findings extend past conceptualizations and suggest that supportive leaders effectively yet inadvertently handle the tenuous dynamics related to rejection, nonconformity, and creative engagement.

We note in the introduction that in organizations that strive to increase creativity leaders must tackle the dual challenge of encouraging employees to generate new ideas and of routinely rejecting most of those ideas. Past creativity research has focused sharply on the role leaders play in promoting idea generation in the work context, but it has rarely explored how leaders handle the relationally intense dynamics associated with the rejection of employees' new ideas. For most knowledge workers, the generation of a creative idea is among the most meaningful and positive experiences (Mainemelis, 2001), while the rejection of one's new idea is among the most frequent and unpleasant experiences employees encounter in the creative process. Amabile et al. (2005: 388) found that 86% of incidents of creative insight triggered strong positive emotions, such as "unalloyed happiness," for employees who generated the insights. But when some of these insights were presented to managers and co-workers, 80% of them were rejected or ignored, leaving their originators feeling frustrated, angry, or sad. The high rejection rate is not surprising, considering that managers have little choice but to routinely reject most new ideas. Employees' negative emotional reactions to rejection are not surprising either, given the extant body of findings about the high degrees of passion and commitment that employees invest in the creative process (Kark & Carmeli, 2009).

What is more surprising is that, to date, very little research has been conducted on how employees react after their managers reject their ideas, and how managers, in turn, respond to their employees' post-rejection reaction. Due to its focus on the post-rejection period, our study expands the conceptual range of creativity research to include investigations of leader–employee interactions that ensue after an employee's new idea has been rejected. Overall, while past creativity research has focused on idea generation, creative engagement, and leaders' encouragement (Shalley et al., 2004), our study opens a conceptual door for examining leaders' role in idea elaboration, idea rejection, and creative deviance.

Our contribution to leadership research is threefold. First, our conceptualization of leaders' responses to creative deviance can help researchers explore leaders' responses to other deviant behaviors and the range of mistakes and mishaps of non-deviant employees. Second, most leadership studies focus on leader behaviors as leadership *styles* (e.g., transformational/transactional, charismatic/noncharismatic). These leadership behaviors are usually seen as antecedents of employee behavior, and not as mediators or outcomes. The present study conceptualizes leaders' reaction as a 'response' (McCullough et al., 2013), a behavior that is elicited by employees' actions, thus it is an employee-initiated action. Lastly, we contribute to framing and studying leader behaviors as a relational phenomenon. This allows us to look at follower–leader relationship as a nuanced cyclic effect, in which leaders *respond* to employees' actions and, via their responses, they further contribute to shaping follower behaviors.

Our contributions to deviance research are related to the fact that the study of workplace deviance has been dominated, to date, by two research streams that focus on inherently positive or negative deviant behaviors (Warren, 2003). This has led to the exclusion of deviant behaviors, such as creative deviance, which are not inherently positive or negative (Mainemelis, 2010; Staw & Boettger, 1990). Our study suggests that the a priori classification of some deviant behaviors as either positive

or negative is shortsighted; that the same deviant behavior in the same context and the same time period may produce both positive and negative outcomes; that the social context's normative gatekeepers (leaders) perceive and react to the same form of deviance in varying ways; and that their reactions ultimately influence whether the outcome of deviance is positive or negative. Our study contributes thus a less polarized and more nuanced approach to studying deviant behavior in the workplace.

Practical implications

Our study informs leaders about what is likely to happen when they respond to creative deviance in one or another way. In addition, because creative deviance challenges managers, it has the potential to encourage them to switch gears, from administrators primarily concerned with damage control to inventive leaders interested in exploration (Mainemelis et al., 2015). The notion of creative deviance, if incorporated into leadership development programs (Kark, 2011), may allow managers to enhance their leadership capabilities, widen their responses and gain a better understanding of how such responses affect employees. This knowledge can also contribute to leaders' ability to enhance creativity by reacting in ways that further encourage employees' autonomous and somewhat subversive behaviors.

Limitations and future research directions

Although we collected data across three points in time, some of the relationships in our model may take effect in unequal time frames (Mitchell & James, 2001). For instance, while ignoring does not affect employee creative performance in the short-term, employees who get consistently ignored by their managers, even when breaking the rules, may found it difficult to maintain their creative identity (Jaussi, Randel, & Dionne, 2007), a fact which in the long run may reduce their creative motivation and performance (Wrzesniewski et al., 2003). Future studies should further explore the relationships in our model by collecting data in more time phases and over longer periods of time. An equally interesting question for future research is how stable, volatile, or flexible leaders' responses to creative deviance are over time and across contexts.

Moreover, we focused on the types of leaders' responses and not on their intensity. Considering that past research has suggested that the intensity of a sanction can moderate its consequences (Balliet et al., 2011; Klepper & Nagin, 1989; Ward et al., 2006), future research can investigate whether the intensity of a response moderates the relationships in our model. For example, punishment may achieve a stronger negative effect on creative performance when it is highly severe rather than moderate (Ward et al., 2006). Future studies can look closely also at the proximal situational moderators that may influence the type of response leaders choose or/and their consequences. For instance, leaders' responses to creative deviance may be moderated by such factors as the magnitude of the new idea, from incremental to radical (Madjar, Greenberg, & Chen, 2011); the degree of risk that creative deviance exposes the organization to (Mainemelis, 2010); the prior commitment of the leader to the relationship with the creative deviant (Karremans et al., 2003); the creative deviant's prior idiosyncracy credits and reputation (Di Stefano et al., 2015; Hollander, 1958); and the specific actions that the employee takes during a creative deviance episode.

Employees with different personality structures may have different tendencies to engage in creative deviance (Lin, Law, & Chen, 2012; Lin, Wong, & Fu, 2012) and may also react differently to leaders' responses. For instance, promotion-oriented employees may be quite sensitive and attuned to positive responses (e.g. reward), while prevention-oriented employees may be more attuned to negative responses (e.g., punishment) (Kark & Van Dijk, 2007; Van Dijk & Kluger, 2004). Also, leaders' personal characteristics, such as emotional balancing (Huy, 2002), may affect how they respond to creative deviance in an attempt to balance organizational and relational demands. Thus, future research should explore employees' and leaders' personal characteristics as moderators of the relationships explored in our study.

Our study was conducted in two advertising firms where creativity is quite important. Future studies should attempt to replicate our findings in other professions in which creativity may be a less central component. Future research can also examine how other organizational-level factors, such as structural strain and normative enforcement (Mainemelis, 2010), as well as formalization and work climate (Criscuolo et al., 2014), influence the leader responses and their consequences. For example, leaders may react differently to creative deviance in a work climate of forgiveness (Fehr & Gelfand, 2012), which may affect, in turn, employees' creative behavior and creative deviance. Another possible moderator is culture. For instance, the cultural dimension of power distance (PD) indicates tolerance of inequalities and status differences (Hofstede, 2001; House, Hanges, Javidan, Dorfman, & Gupta, 2004). Our study was conducted in a culture of high PD. It is possible that leaders' reactions to creative deviance may affect people from high PD and low PD cultures differently. This suggests that it may be of interest to test employees tendency for creative deviance and the ways they may respond to leaders' varied reactions to creative deviance across different cultures. That said, the interviews conducted in our study suggest that in contexts like advertising agencies, the global industry-level culture may be at least as important as national culture in informing leaders' and employees' behaviors in relation to creative deviance. Future studies should further explore our model, taking into consideration the different aspects of the organization's climate and the industry and national cultures.

Our study enhances the extant creativity literature by establishing a connection between creativity and deviance in the workplace, and by highlighting the pivotal role that leaders play in channeling employee creative deviance to different outcomes and in different ways. Our findings suggest that some leader responses have no effect, other leader responses can backfire, and that creative deviance leads to higher levels of employee creative performance only when it is rewarded by a leader who is highly supportive of employees' creative behavior in the work context.

Appendix

A.1. Leaders' responses to creative deviance scales

Instruction: When I committed one or more acts of creative deviance in the last two months, my supervisor:

A.1.1. Punishing

1. Held me accountable for what I did.
2. Criticized me in a negative way.
3. Started behaving to me in less favorable ways.
4. Has made me pay for disobeying his/her orders.
5. Has punished me for what I did.
6. Has formally evaluated my performance in a negative way.
7. Has withheld organizational rewards from me.
8. Has assigned to me less interesting or/and less important work/projects to do.

A.1.2. Rewarding

1. Quickly acknowledged my passion for pursuing a creative idea.
2. Gave me positive feedback about not giving up on my idea.
3. Praised me for my commitment to my creative ideas against his/her orders.
4. Expressed to other people in the organization that he/she appreciates my strong commitment to creative work, even if I have disobeyed him/her.
5. Showed that he was really pleased that I took a personal risk to keep my creative idea alive and growing.
6. Behaves after this incident as he/she thinks more highly of me as a creative person.
7. After the incident he/she has started giving me more autonomy to do my work.
8. In the end he/she has rewarded me for pursuing my idea despite his/her instructions.

A.1.3. Ignoring

1. Neither praised nor criticized me for the incident.
2. Didn't say or do anything at all about the incident.
3. Completely ignored my disobedient behavior.
4. Didn't inquire at all about why I didn't listen to him/her on that occasion.
5. He/she has overlooked the incident.

A.1.4. Forgiving

1. Criticized my behavior but in a forgiving way.
2. Showed me that he/she was not going to hold up the incident against me in the future.
3. Expressed his/her disappointment about the incident but in the end has forgiven me.
4. Told me that just for this time he/she is going to forgive me.
5. I feel that he/she has truly forgiven me for not listening to him/her.

A.1.5. Manipulating

1. For a while he/she did not say anything to me, probably because he/she was just waiting to see whether my idea was going to work or not.
2. At first he/she did not respond to my disobedience, probably because he/she was unsure whether he/she could extract a benefit from my idea.
3. I felt that he/she was just waiting for my idea to show its value so that he/she could then obtain a benefit from it.
4. I felt that he/she was just waiting for my idea to fail so that he/she could then punish me in some way.
5. Made me feel that his/her reaction to my disobedience was going to be completely determined by the final success or failure of my idea.

A.2. Creative deviance scale

(Lin, Law, & Chen, 2012; Lin, Wong, & Fu, 2012; the original scales used in this study are in Chinese). *Instruction: In the last two months, when my immediate supervisor rejected some of my new ideas:*

1. I continued to improve some of the new ideas, although they did not receive my supervisor's approval.
2. In my work time, I often thought about how to make the rejected ideas better.
3. Although my supervisor asked me to stop developing some new ideas, I still worked on these ideas.
4. Besides working on ideas that were approved by my supervisor, I also exerted effort in improving the rejected ideas by collecting information and trying again.

5. I spent some of my work time in developing the ideas rejected by my supervisor.
6. Up to this point I still have not given up on some of the rejected ideas.
7. I have improved some rejected ideas in my working hours.
8. Although some ideas were stopped by the supervisor, I worked on the improved versions of these ideas.
9. Using some of my work time or resources, I kept on working on the rejected ideas.

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