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ORIGINAL PAPER

Will Creative Employees Always Make Trouble? Investigating the Roles of Moral Identity and Moral Disengagement

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Abstract Recent research has uncovered the dark side of creativity by finding that creative individuals are more likely to engage in unethical behavior. However, we argue that not all creative individuals make trouble. Using moral self-regulation theory as our overarching theoretical framework, we examine individuals' moral identity as a boundary condition and moral disengagement as a mediating mechanism to explain when and how individual creativity is associated with workplace deviant behavior. We conducted two field studies using multi-source data to test our hypotheses. In Study 1, the results indicated that creativity positively predicted moral disengagement for those low in moral identity. In Study 2 with multi-wave data, we replicated the finding that moral identity moderated the effect of creativity on moral disengagement in Study 1 and further revealed that moral disengagement mediated the interactive effects of creativity and moral identity on workplace deviant behavior. The theoretical and practical implications of these findings and directions for future research are discussed.

Keywords Creativity · Deviant behavior · Moral identity · Moral disengagement · Dark side · Mediated moderation model

Creativity has been increasingly considered as a key source of organizational innovation and competitiveness, and even societal development (Amabile 1983a, b, 1988; Amabile et al. 2005; Oldham and Cummings 1996; Zhou and George 2001). As a result, creativity literature has proliferated in the last several decades, and various studies have attempted to understand how to foster creativity through influences of some individual-level and contextual-level factors (see Anderson et al. 2014; George 2007; Shalley and Zhou 2008; Zhou and Hoever 2014, for reviews). In spite of different research focuses, theoretical perspectives, or analytical levels, existing studies share the premise that creativity is beneficial for organizations (Gino and Ariely 2012; Shalley and Zhou 2008; Shalley et al. 2004). Nevertheless, there are several critical questions that have not been addressed yet: Whether, when, and how creativity has hidden costs for organizations? Given the sparse inquiries that have probed into these questions, Anderson et al.'s review of creativity literature (2014) calls for future research to unveil the dark side of creativity.

Gino and Ariely (2012) were among the first to challenge the assumption that creativity is always beneficial for organizations. Using five laboratory experiments, they found that creative individuals were more likely to engage in unethical behaviors since they were more capable of

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justifying their immoral behaviors. Indeed, Gino and Ariely's (2012) work illustrated the dark side of creativity and provided us with a new angle to view creativity. However, this prediction may not be true for all creative individuals. For instance, there are certainly highly creative artists and scientists who do not behave more dishonestly than their less creative peers.

Therefore, the present study attempts to shed light on a possible boundary condition under which creativity leads to more workplace deviant behavior, defined as "voluntary behavior that violates significant organizational norms, and in so doing, threatens the well-being of the organization and/or its members" (Robinson and Bennett 1995, p. 556),[1] and on a plausible underlying explanatory mechanism. More specifically, we draw upon moral self-regulation theory (Bandura 1991) to develop our theoretical framework, proposing that employees' creativity and moral identity interact to influence their workplace deviant behavior through moral disengagement (i.e., a set of cognitive justifications that allow individuals to commit immoral acts without apparent guilt and self-sanctions; Bandura et al. 1996; Detert et al. 2008). This is a critical extension for both theory and practice. Theoretically, identifying a boundary condition as well as an underlying mechanism of the positive effect of creativity on deviance can elucidate *when* and *how* creativity is detrimental and thus enrich the literature (Anderson et al. 2014; Bolino et al. 2013). Practically, it is important to help organizations avoid creativity's potential negative impacts.

The present study makes several important contributions to the existing literature of creativity and workplace deviant behavior. First, this study advances the understanding of how to reduce the negative costs of employees' creative sparks (e.g., workplace deviant behavior) in organizational settings. Extending Gino and Ariely's (2012) work, we propose that creative employees do not always engage in more deviant behaviors—their moral identity is likely to mitigate the positive impact of creativity on deviance. Our research thus examines the boundary condition of the dark side of creativity, which enhances our understanding of how to reduce the cost of creativity.

Second, we further highlight the role of moral disengagement as a plausible underlying mediator explaining the interactive effects of creativity and moral identity on workplace deviant behavior. Applying moral self-regulation theory (Bandura 1991), we propose that, employees' creativity increases their abilities to justify their potential workplace deviant behavior. However, when employees' moral identity is high, even highly creative employees will be difficult to morally disengage, as people with high moral identity tend to regulate their moral disengaging process to be consistent with their moral standard and self-view. Further, low moral disengagement leads to less workplace deviant behavior. Identifying this mechanism can not only shed light on the theoretical rationale for why creativity and moral identity jointly affect employee deviant behavior, but also can help managers take measures to reduce workplace deviance related to high levels of creativity.

Third, the research advances the workplace deviance literature by highlighting creativity as a potential antecedent of workplace deviant behavior. As deviant behavior is pervasive at workplace and is costly to both organizations' and employees' well-being (Mount et al. 2006), numerous studies have been conducted to identify its individual-level and contextual-level antecedents (Kish-Gephart et al. 2010). By demonstrating creativity's relevance to workplace deviant behavior, we extend the scope of potential antecedents of workplace deviant behavior beyond work attitudes, leadership, and ethical contexts (Kish-Gephart et al. 2010). These findings are also likely to be generalized to other counterproductive behaviors at workplace (e.g., unsafe behavior). We will elaborate on these and other contributions and implications of the current research in Discussion section.

Theoretical Groundings and Hypotheses Development

The Buffering Role of Moral Identity in the Relationship Between Creativity and Moral Disengagement

Creativity has been defined as generation of ideas that are both novel and useful (Amabile 1983a, b). Recent research has started to treat individual creativity as an independent variable and demonstrated that it is a critical antecedent of individual psychological processes, behaviors and outcomes in the workplace (Matthew 2009). For instance, Baer (2012) investigated how individual creativity influenced the implementation of creative ideas in

[1] We recognize that workplace deviant behavior and unethical behavior are not exactly the same thing, despite the overlap in most of their elements (Sackett et al. 2006). Workplace deviant behavior involves intentional acts that violate organizational norms and hurt organizations and their members (Bennett and Robinson 2003), while unethical behavior involves acts that violate widely accepted social norms. Sometimes, employees' certain behavior (e.g., working slowly) violates organizational norms but not social norms, while some other behavior (e.g., lying to consumers) violates social norms but not organizational norms (Robinson and Bennett 1995). In this research, we focus on workplace deviant behavior rather than all forms of unethical behavior, as workplace deviant behavior is pervasive and particularly detrimental to both organizations' functioning and employees' benefits (Mount et al. 2006). Unless otherwise indicated, for simplicity, we used "workplace deviant behavior" and "unethical or immoral behavior in organizational settings/at workplace" interchangeably in this research.

organizations. Matthew (2009) examined leader creativity as a predictor of leading change in organizations. This line of reasoning suggests that creativity, manifested in original and useful ideas and works (Dietrich 2004; Fink et al. 2007), is likely to play a substantial role in influencing individual workplace behaviors and outcomes.

Scholars have found that creative individuals are able to perceive and interpret problems from a novel perspective (Simonton 1999), and break conventional ways of thinking (Amabile 1983a; Newell et al. 1962). Prior literature suggests that divergent thinking (Amabile 1983a; Guilford 1967, 1968, 1982; McCrae 1987; Runco 1991, 2004) and cognitive flexibility (Eysenck 1993; Spiro and Jehng 1990) were two main components underlying individual creativity. Divergent thinking represents individuals' ability or thought process to generate novel ideas by exploring many possible solutions (Runco 1991). Cognitive flexibility represents individuals' mental ability to switch between thinking about two different concepts and to restructure multiple knowledge differently and selectively in response to appropriate environmental stimuli (Scott 1962). Existing literature has established that divergent thinking and cognitive flexibility inherent in creativity increase the likelihood that individuals think outside preexisting boundaries (Guilford 1968, 1982), apply unique perspectives when making decisions (Ashby et al. 1999; Spiro and Jehng 1990), enact perspectives that run counter to the norm (Eysenck 1993; Nijstad et al. 2010), and think uniquely and find novel approaches to navigate obstacles and solve problems (Amabile 1983a; Simonton 1999; Spiro and Jehng 1990). In addition, as both divergent thinking and cognitive flexibility involve generating ideas and solutions in multiple ways, they usually function together. Consequently, employees high in divergent thinking and cognitive flexibility may be more likely to think outside the box in a variety of situations, including those relevant to ethics (Beaussart et al. 2013). In other words, while divergent thinking and cognitive flexibility enable employees to generate novel solutions at work, in the context of behavioral ethics, they might be problematic, as they may also help employees find novel reasons to justify their potential self-serving unethical behaviors (Baucus et al. 2008; Gino and Ariely 2012).

Moral disengagement theory may help explain why creativity and the accompanying divergent thinking and cognitive flexibility may relate to deviant behaviors. In moral self-regulation theory, Bandura (1991) suggests that moral conduct is regulated by two major types of sanctions: social sanctions and internalized sanctions, both of which operate in an anticipatory way. As most of unethical behaviors go socially undetected, social sanctions have limited deterrent power. Thus, internalized sanctions play a central role of regulating moral acts (Bandura 1991). Put differently, according to moral self-regulation theory, moral behavior is regulated mainly through the mechanisms of self-reactive influence (Bandura 1991). Individuals usually do not conduct immoral or unethical behaviors unless they are able to find reasons to justify these actions. Through the process of moral disengagement, people are likely to engage in unethical behaviors as their detrimental actions become personally and socially acceptable (Bandura 1991; Bandura et al. 1996; Zhong 2011). In moral self-regulation framework, moral disengagement represents individuals' cognitive process of self-serving rationalizations. Theoretically, although moral disengagement is a relatively stable trait, it can also be influenced by the context and thereby be conceptualized as a state variable (Fida et al. 2015; Kish-Gephart et al. 2014; Shu et al. 2011). It is defined as a set of cognitive justifications that allow individuals to commit immoral acts without apparent guilt and self-sanctions (Bandura et al. 1996; Detert et al. 2008). Thus, any condition that allows one to justify self-interested or immoral behavior enhances the likelihood that such behavior will be enacted (Schweitzer and Hsee 2002; Shalvi et al. 2011). Individuals' creativity may be one such condition that promotes self-interested rationalizations and behavior. As postulated above, creative employees tend to have high levels of divergent thinking, which helps them find many possible ways or solutions to rationalize their potential workplace deviant behavior. In addition, creative employees also tend to have high levels of cognitive flexibility, which helps them restructure relevant information on their deviant behaviors, making them seem morally appropriate and acceptable. For example, creative employees may cognitively restructure aggression toward coworkers as something that coworkers will eventually view as developmental and in their best interests. Creative employees may also suppress moral agency by rationalizing that people cannot be blamed for stealing things when all their coworkers are doing it too. Additionally, creative employees may downgrade the perceived stress of their coworkers who are treated roughly by them through considering them as lacking feelings that can be hurt. Therefore, Gino and Ariely (2012) suggested that these two simultaneous processes lead highly creative employees to find self-serving justifications for their potential immoral behaviors and, as a result, become more morally disengaged. In other words, they suggested creativity facilitates the self-serving justification process by increasing capacities to develop credible rationalizations for engaging in deviant behaviors (Gino and Ariely 2012).

However, this prediction may not be true for all creative individuals. In the present research, we propose that highly creative employees with certain traits may not be more likely to morally disengage. For instance, those who strive to maintain a positive and honest self-view may be not

susceptible to moral disengagement (Aquino and Reed 2002; Greenwald 1980). Individuals vary on moral identity, or a construct that captures the extent to which individuals value moral self-images and regard themselves as moral persons (Aquino and Reed 2002, p. 1424). Research has shown that individuals with high levels of moral identity tend to enact in accordance with their internal moral standards and in turn behave ethically (Detert et al. 2008; Reynolds and Ceranic 2007). More specifically, individuals with high levels of moral identity are characterized as having high levels of moral self-regulation (Aquino and Reed 2002), which fosters individuals to pay attention to, weigh, calculate, and integrate morally related information before behaving morally or immorally. Due to its internalized moral self-regulation power, moral identity has been shown to buffer the impacts of certain factors (e.g., depletion) on moral disengagement (e.g., Gino et al. 2011; Lee et al. 2016).

Drawing upon moral self-regulation theory (Bandura 1991), our research argues that moral identity has an attenuating effect on the relationship between creativity and moral disengagement. Compared with individuals with low moral identity, those with high moral identity are more likely to regulate their behaviors to be consistent with their internal moral standards and moral self-view. Although creative employees are able to find justifying reasons which can be accepted by other people, these "seemingly reasonable" justifications cannot be approved by the strict internal moral standards of individuals with high moral identity. Therefore, the moral disengagement process induced by high divergent thinking and cognitive flexibility is inhibited by a high internal moral standard, high moral identity. In the case of low moral identity, creativity will be easily translated into self-serving justification (Gino and Ariely 2012), as the moral reasoning will not be deterred by strict internal moral standards.

Furthermore, some studies suggest that, compared with those low in moral identity, people high in moral identity have stricter internal moral standards and thus rely less on cognitive resource when making ethically relevant decisions (Gino et al. 2011). For instance, Gino et al. (2011) found that self-regulatory resource depletion positively predicted unethical behavior when moral identity was low, but not when moral identity was high. Supporting this line of arguments, through a functional magnetic resonance imaging (fMRI) study, Greene and Paxton (2009) found that, in a condition where cheating was possible, individuals who enacted honestly did not engage in controlled cognitive processes, while those who enacted dishonestly did. This finding implied that "honest" people (i.e., people with high levels of moral identity) were able to be automatically aware of the immorality of cheating under some certain conditions, and not tempted by the chance for cheating, while "dishonest" people (i.e., people with low levels of moral identity) were tempted by the chance for cheating, and used controlled cognitive processes to calculate whether to enact dishonestly or not. According to these arguments and findings, we suggest that individuals high in moral identity rely less on cognitive resource when facing moral dilemmas; thus, cognitive flexibility along with high creativity may not be used in the moral decision process. In contrast, individuals low in moral identity rely more on cognitive resource; thus, cognitive flexibility associated with high creativity helps to justify their potential unethical behaviors (Gino and Ariely 2012). Drawing upon the rationales above, we propose the following hypothesis:

Hypothesis 1 Moral identity moderates the effect of creativity on moral disengagement such that this effect is positive only when moral identity is low rather than high.

Creativity, Moral Disengagement, and Workplace Deviant Behavior

Based on moral self-regulation theory (Bandura 1991), the activation of moral disengagement inhibits the moral self-regulatory processes that normally regulate unethical behavior. Therefore, moral disengagement leads individuals to conduct workplace deviant behavior without apparent self-censure (Bandura 1991; Bandura et al. 1996, 2001; Fida et al. 2015). Similarly, Kunda (1990) argued that "people are likely to arrive to conclusions that they want to arrive at, but their ability to do so is constrained by their ability to construct seemingly reasonable justifications for these conclusions" (p. 480). Deviant behavior takes various forms at workplace, such as theft, fraud, withholding effort, physical and verbal aggression, poor attendance, or substance use, destruction of property, and so on (Bennett and Robinson 2000; Spector et al. 2006). Before conducting these bad acts, employees need to disengage morally and bypass the moral rules commonly accepted by society or organizations. Various literature has indeed documented that moral disengagement increased unethical behavior and deviant behavior at work (e.g., Bandura et al. 1996; Detert et al. 2008; Duffy et al. 2012; Schweitzer and Hsee 2002; Shalvi et al. 2011). For instance, Fida et al. (2015) proposed and found that moral disengagement mediated the effect of experienced negative emotions in response to stressors on workplace deviant behavior. As a result, moral disengagement has been regarded as a particularly important mechanism to understand workplace deviant behavior and ethics (Treviño et al. 2014; Treviño et al. 2006). Based on the above rationale and evidence, we propose the following hypothesis:

Hypothesis 2 Moral disengagement is positively related to workplace deviant behavior.

Furthermore, we propose an integrative model that moral disengagement mediates the interactive effects of creativity and moral identity on workplace deviant behavior. More specifically, as argued above, when moral identity is low rather than high, creativity is positively related to moral disengagement. In addition, moral disengagement is a significant predictor of deviant behavior at work. In other words, when moral identity is low, creativity will be positively linked to deviant behavior, as creativity helps employee find novel justifications (i.e., moral disengagement) for their potential immoral behavior (Baucus et al. 2008; Gino and Ariely 2012). In contrast, when moral identity is high, creativity is less likely to be related to deviant behavior, as even though creativity helps employee find novel justifications, these "seemingly reasonable" justifications are hardly accepted by the internal standards and self-regulation of those high in moral identity (Aquino and Reed 2002; Lee et al. 2016). Taken together, we expect that creativity and moral identity interact to affect employee moral disengagement, which in turn impacts employee deviant behavior. Therefore, we expect the interactive effects of creativity and moral identity to be indirectly related to workplace deviant behavior through the mediation of moral disengagement. Therefore, we propose:

Hypothesis 3 The interactive effects of creativity and moral identity on workplace deviant behavior are mediated by moral disengagement.

Figure 1 depicts the theoretical model in the present research.

Research Overview

To examine the proposed hypotheses, we conducted two field studies using different designs, samples, and measures. In Study 1, we tested Hypothesis 1. Despite several strengths (e.g., multi-source data collection), Study 1 had some limitations. For instance, it used a cross-sectional design and only tested a subset of the hypotheses (i.e., the interaction effects of creativity and moral identity on moral disengagement). Considering these concerns, in Study 2, we conducted a two-wave field survey using samples from a different industry (i.e., manufacturing industry, compared with the banking industry in Study 1), measuring creativity with a different scale (Denzin 1978; Jick 1979), and testing the whole mediated moderation model. Therefore, Study 2 served to replicate and extend Study 1. Taken together, these two studies offered a set of findings with relatively strong internal validity and external generalizability.

Study 1: Methods

Participants and Procedures

In Study 1, we collected data in a large bank in Northern China. 574 full-time employees as well as their direct supervisors were invited to participate in our research project. Later, the human resource department provided us with a list containing the demographic information such as gender, age, education, and tenure of all participants. Besides, the HR department made a timetable for all participants according to their shifts and informed them of the specific time and place (a big conference room in the headquarters) in advance through the internal network. Furthermore, to enhance data quality, we administered and collected the questionnaires on site. Before the employees began to fill in the survey, we explained our research purpose and emphasized the importance of truthful answers. Confidentiality was ensured by guaranteeing that all surveys would be carried away by researchers immediately after they finished the study and all answers would be only used for our research. To reduce common method variance (CMV, Podsakoff et al. 2012), we asked employees to report their moral identity and moral disengagement, while invited their supervisors to assess employees' creativity. On average, supervisors evaluated

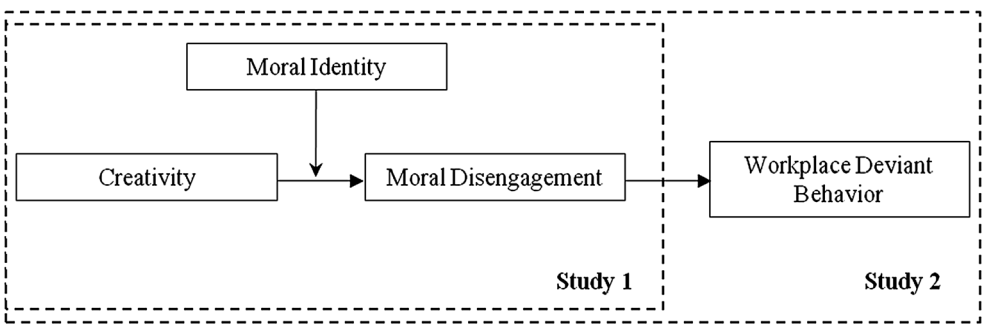

Fig. 1 Theoretical model about how creativity influences workplace deviant behavior

eight employees, ranging from one to twenty. Finally, 460 valid responses were returned (for a response rate of 80%). Among the final sample, 74% were female and 88.26% had bachelor or higher degrees. Their average age was 29.06 years, and average tenure in the current company was 4.66 years.

Measures

As all measures used in Study 1 and Study 2 were originally from English, we chose Brislin's (1980) "translation and back-translation" procedure to translate them into Chinese. Unless otherwise indicated, all the scales in both Study 1 and Study 2 were assessed using a 5-point Likert-type scale (1 = *strongly disagree*; 5 = *strongly agree*).

Creativity

To make measurement at an operational level align with the conceptual content at a theoretical level, we measured employees' creativity using the 3-item scale developed by Oldham and Cummings (1996). In addition, as creativity is highly respected and rewarded in modern organizations (George 2007; Shalley and Zhou 2008; Zhou and Hoever 2014), self-reported creativity is highly likely to suffer from potential social desirability bias. More importantly, in Study 1, moral identity and moral disengagement only can be rated by employees themselves; thus to reduce common method variance (Podsakoff et al. 2012), creativity cannot be reported by employees themselves. As a result, in order to avoid the potential social desirability bias and common method variance, we invited supervisors to rate employees' creativity. An example item is "This employee's work is original and practical" ($\alpha = .93$).

Moral Identity

Following previous studies on moral identity (e.g., Barclay, Whiteside, and Aquino 2014; Reynolds and Ceranic 2007; Skarlicki et al. 2008), we assessed employees' moral identity through Aquino and Reed's (2002) 10-item scale and combined the two subdimensions to assess individual overall moral identity. We combined these two subdimensions to assess individual overall moral identity for two main reasons. First, we suggest both internalization and symbolization are able to buffer the positive impact of creativity on moral disengagement. According to Aquino and Reed (2002), internalization reflects "the degree to which the moral traits are central to the self-concept" (p. 1427) and symbolization reflects "the degree to which the traits are reflected in the respondent's actions in the world" (p. 1427). As defined, the internalization dimension of moral identity indicates the significance of moral traits to one's identity, which guides individuals to obey internal moral self-views and conduct moral behaviors (Aquino and Reed 2002; Skarlicki et al. 2008). Meanwhile, the symbolization dimension of moral identity emphasizes that moral traits should be expressed through his or her behaviors. In this sense, individuals with high symbolization cannot accept those "seemingly reasonable" justifications and require themselves to behave morally. Therefore, we argue that moral identity (including both internalization and symbolization) can attenuate the positive relationship between creativity and moral disengagement. Second, prior literature on moral identity typically combined the two subdimensions to form moral identity (e.g., Barclay et al. 2014; Reynolds and Ceranic 2007; Skarlicki et al. 2008), and thus we follow this trend. The scale asked participants to imagine a person who owns nine moral traits (i.e., caring, compassionate, fair, friendly, generous, hardworking, helpful, honest, and kind) and to indicate the extent to which having these traits is critical to their sense of themselves. An example item is "It would make me feel good to be a person who has these characteristics" ($\alpha = .84$).

We also re-analyzed the moderating effects of internalization and symbolization, respectively, and the results revealed that they were similar to results of combined moral identity reported below and there were no significant differences between these two subdimensions. (These results are available upon request from the first author.)

Moral Disengagement

Participants' moral disengagement was measured by an 8-item scale developed by Moore et al. (2012). This instrument was developed based on Bandura et al.' s (1996) original measure of moral disengagement, but included only one item for each moral disengagement mechanism. It achieved pretty high levels of reliability and validity in Moore et al.'s (2012) study. An example item is "Playing dirty is sometimes necessary in order to achieve noble ends" ($\alpha = .88$).

Control Variables

Following previous research of moral disengagement and workplace deviant behavior, we controlled for the potential impacts of employees' gender (female = 0; male = 1), age (in years), education (senior high school or below = 1; junior college = 2; bachelor degree = 3; master degree or above = 4), and tenure (in years) (Detert et al. 2008; Jones 2009; Penney and Spector 2005). Besides, given that job satisfaction was found to influence moral disengagement and workplace deviant behavior, we also included job satisfaction as a control variable in our analyses

(Claybourn 2011; Duffy et al. 1998; Spector et al. 2010). Job satisfaction was measured using the 6-item scale developed by Tsui et al. (1992). Participants reported on a 7-point Likert-type scale (1 = *strongly disagree*; 7 = *strongly agree*). An example item is "I am satisfied with the nature of the work I perform" ($\alpha = .90$). Controlling for them can better demonstrate the incremental predictive validity of the interaction between creativity and moral identity (Bernerth and Aguinis 2015). We note that excluding these control variables (Meehl 1971) from hypotheses testing did not significantly change the results (including regression coefficients and significance levels) presented below. We also ran additional analyses to examine the potential influence of the employee number evaluated by each supervisor and job category (i.e., classified as either teller-focused (coded as 1, 83.3% cases) or non-teller-focused (coded as 0, 16.7% cases) jobs). The results (including regression coefficients and significance levels) were essentially the same as those reported in Table 2. (These results are available upon request from the first author.)

Analytic Strategy

Even though no group-level constructs were included in our model, our data in Study 1 were nested in different groups (i.e., supervisors, as each group had one supervisor) in nature. While ordinary least squares (OLS) requires the independence of the sample, OLS is not appropriate for our hypothesis testing due to the violation of the homoscedasticity assumption (Hofmann 1997). Thus, we chose hierarchical linear model (HLM) to examine our hypotheses, as it accounts for the correlation structure of data within groups and can estimate the impacts of group-level factors on individual-level outcomes (Bryk and Raudenbush 1992; Hofmann et al. 2000). That is, HLM can take the independence into consideration and provide more conservative statistical testing (Raudenbush and Bryk 2002). To provide more evidence, we tested null models by running a one-way analysis of variance using HLM before testing our hypotheses. The results of null model revealed that group accounted for 6.33% of moral disengagement, and the Chi-square tests revealed that HLM was significantly better than the linear regression model ($\Delta\chi^2 = 4.77$, $\Delta df = 1$, $p < .05$). Thus, statistically, it is reasonable to use HLM to test our model. Also, we grand-mean-centered all the individual-level predictors following Hofmann and Gavin (1998) and Raudenbush's (1989) suggestions to make the results more interpretable.

Study 1: Results and Discussion

Table 1 presents the means, standard deviations, and correlations (i.e., did not take into account the non-independence within groups) of all studied variables in Study 1. We first conducted confirmatory factor analyses (CFAs) on our three key constructs (creativity, moral identity, and moral disengagement). Scales with many items may decrease the ratio of sample size to number of estimated parameters and may constitute over-identified variables (Little et al. 2002; Williams et al. 2009). Therefore, we generated indicators using dimensional scores or item parcels by the item-to-construct balance approach in line with prior literature (e.g., Grant and Berry 2011; Ou et al. 2014; Williams et al. 2009; Zhang et al. 2012). As the creativity scale used in Study 1 consisted of only three items, we chose the item score as the indicators in accordance with the total disaggregation model (Bagozzi and Edwards 1998; Williams et al. 2009). The CFA results revealed that the 3-factor model [$\chi^2(17) = 19.20$, *n.s.*; RMR = .01, RMSEA = .02, CFI = .999, TLI = .998] had a better fit than the 2-factor model that combined moral identity and moral disengagement [$\chi^2(19) = 107.28$, $p < .001$; RMR = .02, RMSEA = .10, CFI = .96, TLI = .94; $\Delta\chi^2 = 88.08$, $\Delta df = 2$, $p < .001$], the 2-factor model that combined creativity and moral identity [$\chi^2(19) = 206.27$, $p < .001$; RMR = .05, RMSEA = .15, CFI = .91, TLI = .87; $\Delta\chi^2 = 187.07$, $\Delta df = 2$, $p < .001$], the 2-factor model that combined creativity and moral disengagement [$\chi^2(19) = 1150.36$, $p < .001$; RMR = .09, RMSEA = .36, CFI = .45, TLI = .19; $\Delta\chi^2 = 1131.16$, $\Delta df = 2$, $p < .001$], and the 1-factor model [$\chi^2(20) = 1238.19$, $p < .001$; RMR = .09, RMSEA = .36, CFI = .41, TLI = .17; $\Delta\chi^2 = 1218.99$, $\Delta df = 3$, $p < .001$], providing evidence of these three variables' distinctiveness (Coovert and Craiger 2000; Hu and Bentler 1999).

To test Hypothesis 1 (see Table 2), we included all the control variables in Model 1. The results of Model 2 revealed that employees' creativity was not significantly associated with moral disengagement ($\hat{\gamma} = .06$, *n.s.*).

In Model 3, we added the interaction term of creativity and moral identity, and the results showed that moral identity significantly buffered the effect of creativity on moral disengagement ($\hat{\gamma} = .23$, $p < .01$). We compared the simple slopes at two levels of moral identity (1 SD above the mean and 1 SD below the mean; Aiken and West 1991). The results indicated that high creativity significantly predicted higher moral disengagement when moral identity was low ($\hat{\gamma} = .17$, $p < .01$), but not when moral identity was high ($\hat{\gamma} = -.06$, *n.s.*). Following Cohen et al.'s (2003) procedure, we plotted this interacting effect in Fig. 2. Thus, Hypothesis 1 was supported in Study 1.

Table 1 Means, standard deviations, and correlations of study variables in Study 1

Variable	M	SD	1	2	3	4	5	6	7
1. Gender	0.26	0.44							
2. Age	29.06	4.11	.03						
3. Education	2.90	0.35	.00	−.07					
4. Tenure	6.66	4.66	–.01	.88***	–.15**				
5. Job satisfaction	5.57	0.84	.05	.06	–.05	.07			
6. Creativity	3.82	0.57	.13**	–.07	.14**	–.06	.05		
7. Moral identity	4.27	0.49	–.04	–.13**	.04	–.15**	.40***	.01	
8. Moral disengagement	2.01	0.58	.11*	–.03	.03	–.01	–.37***	.06	–.37***

$N = 460$

* $p < .05$

** $p < .01$

*** $p < .001$

Table 2 Hierarchical linear model results for Hypothesis 1 in Study 1: the effect of creativity on moral disengagement

Variables	Moral disengagement		
	Model 1	Model 2	Model 3
Intercept	2.01***	2.01***	2.01***
	(0.03)	(0.02)	(0.02)
Gender	0.18**	0.17**	0.14**
	(0.06)	(0.06)	(0.05)
Age	–0.02^{+}	−0.02	−0.02
	(0.01)	(0.01)	(0.01)
Education	0.04	0.02	0.03
	(0.07)	(0.07)	(0.07)
Tenure	0.02^{+}	0.02^{+}	0.01
	(0.01)	(0.01)	(0.01)
Job satisfaction	–0.26***	−0.26***	−0.19***
	(0.03)	(0.03)	(0.03)
Creativity		0.06	0.06
		(0.04)	(0.04)
Moral identity			−0.30***
			(0.05)
Creativity × moral identity			−0.23**
			(0.09)
σ^2	.28	.28	.26
τ (intercept)	.00	.00	.00
Proportion within-group variance explained[a]		.00	.07
N (level 1)	460	460	460
N (level 2)	55	55	55
Deviance[b]	717.40	715.69	679.35

The standard errors in the estimations are reported in parentheses

[a] The proportion of variance explained was calculated based on the parameters in Model 1

[b] Deviance is a measure of model fit; the smaller the deviance is, the better the model fits. Model deviance = −2 × log-likelihood of the full maximum likelihood estimate

$^{+}$ $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

As suggested by one anonymous reviewer, consistent with prior literature (Liao and Chuang 2007), we further conducted OLS analyses to examine the robustness of the HLM results. Despite not taking into account the correlational structure within each group, some scholars suggested OLS has advantages of stability and robustness in small samples or with the misspecified model (James and Williams 2000; Liao and Chuang 2007). The results of OLS analyses showed highly consistent pattern with the HLM results (including regression coefficients and significance levels; these results are available upon request from the first author), indicating our HLM results were robust.

In Study 1, the findings showed that creativity indeed did not have a main effect on moral disengagement, and further provided strong evidence that moral identity buffered the impact of creativity on moral disengagement. That is, compared with those low in creativity, highly creative employees were more likely to morally disengage only when they had low levels of moral identity rather than high levels of moral identity. Despite its several strengths (e.g., multi-source data collection), Study 1 had several limitations. For instance, all the variables were measured at the same time period. In addition, it could not examine the whole theoretical model we had proposed. We then conducted Study 2 in order to address these concerns.

Study 2: Methods

Participants and Procedures

To address the empirical and theoretical limitations of Study 1, Study 2 collected multi-wave and multi-source data in a large manufacturing company in China. First, in order to get the support from the company, the first author gave a speech to top management and middle management teams. Then, 771 frontline employees and their direct supervisors were invited to participate in our research. Also, the HR department provided us with a list of all participants which contained the demographic information such as gender, age, education, and tenure. Identification code was used to match supervisors' and their subordinates' ratings. Each time, employees were invited to fill in the survey in a big cafeteria, while supervisors were arranged in a big conference room. Also, we administered and collected the prepared questionnaires on site. The research purpose was explained, and confidentiality was ensured to all participants.

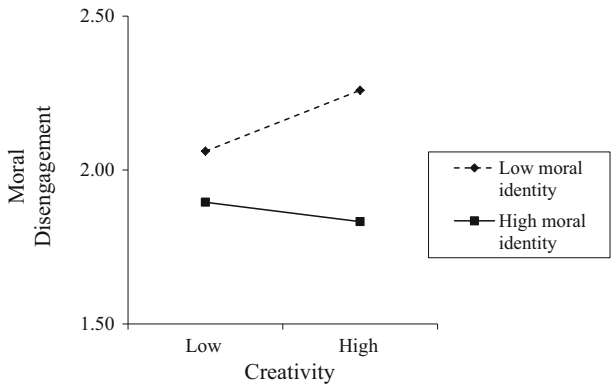

Fig. 2 Moderating role of moral identity on the relationship between creativity and moral disengagement in Study 1

At time 1, participants reported their own moral identity, while their supervisors rated their creativity. This time, 551 matched questionnaires were returned (for a response rate of 71%). Around 7 months later, all 551 employees who completed time 1 survey were invited to participate in time 2 survey. They were asked to report their moral disengagement and workplace deviant behavior. Finally, 347 valid surveys were returned (for a response rate of 63% at time 2; for a final response rate of 45%). On average, supervisors evaluated four employees, ranging from one to twelve. In order to test possible response bias, we compared those who only participated in time 1 survey with those who participated in both surveys. Results revealed that there were no significant differences between the two groups on demographic characteristics (e.g., gender, age, and education) and measured variables (e.g., moral identity).

Among the final sample, about 31% were female. Their average age was 25.22 years. Approximately 20% of them held college or higher educational degrees. Also, they worked for their companies for 2.18 years on average.

Measures

Creativity

Following the principles of triangulation (Bickman et al. 1998; Jick 1979), we adopted Zhou and George's (2001) 13-item scale to measure creativity in Study 2. Both Oldham and Cummings's (1996) 3-item scale and Zhou and George's (2001) 13-item scale are widely used in existing literature to measure creativity. Triangulation is defined as "the combination of methodologies in the study of the same phenomenon" (Denzin 1978, p. 291). It contains two distinct types: One is called "between (or across) methods" which uses two or more distinct methods, and the other is called "within method" which employs several techniques within a given method. Jick (1979) further elaborated that "For quantitative methods such as survey research, this [within-method triangulation] can take the form of multiple scales or indices focused on the same construct" (p. 603). Following the idea of "within-method" triangulation, we

adopted two commonly used creativity scales in Study 1 and Study 2, respectively. Although this approach cannot help us much in terms of generalizability, using different commonly used scales and obtaining similar results can help establish the robustness of our findings and provide evidence for the results' internal consistency and reliability (Jick 1979). This approach about the principles of triangulation has been frequently employed in existing studies (e.g., Cullen et al. 2003; Chua et al. 2012; Duffy et al. 2012; Grant et al. 2009; Krishnan 2008). For instance, in Study 1 of Grant et al.'s (2009) research, the independent variable (i.e., prosocial values) was measured by the four highest loading items from the Schwartz value survey (Schwartz and Sagiv 1995), and sample items are "being helpful" and "being responsible." In their Study 2, prosocial values were measured by a 10-item altruism scale (International Personality Item Pool 2001), and sample items are "I am concerned about others" and "I love to help others." Consistent with Study 1, supervisors were invited to assess employee creativity to reduce potential social desirability bias and common method variance. An example item is "The employee suggests new ways to achieve goals or objectives" ($\alpha = .95$).

Moral Identity

Moral identity was assessed with the same moral identity scale used in Study 1 ($\alpha = .84$). Similar to Study 1, in Study 2 we also re-tested the moderating effects of internalization and symbolization, respectively, and the results revealed similar patterns to the results of combined moral identity reported below and there were no significant differences between these two subdimensions. (These results are available upon request from the first author.)

Moral Disengagement

We measured moral disengagement with the same scale used in Study 1 ($\alpha = .91$).

Workplace Deviant Behavior

We measured employees' workplace deviant behavior using Newstrom and Ruch's (1975) scale, which consisted of 17 items. We chose this measure in the current study for two main reasons. First, Newstrom and Ruch's (1975) scale was one of most widely used scales in the business ethics research (Akaah 1996; Ford and Richardson 1994; Kaptein 2008; Moon and Franke 2000; Reynolds 2008). More importantly, Newstrom and Ruch's (1975) scale was usually used in a self-report manner (e.g., Reynolds 2008; Reynolds and Ceranic 2007; Reynolds et al. 2014; Zuber and Kaptein 2014), which fitted this study better. (As creativity was assessed by supervisors, we measured workplace deviant behavior using employees' self-report to avoid potential common method variance.) Two example items are "Use company service for personal use" and "Claim credit for someone else's work" ($\alpha = .97$).

To further validate the validity of Newstrom and Rusch's (1975) measure, we conducted a post hoc study. Specifically, 92 employees were invited to participate this survey via sojump.com (similar to the Qualtrics.com or Mechanical Turk in USA; Johnson et al. 2014). Participants were instructed to name one of this coworkers with middle-level performance, and then rated this coworker's deviant behaviors using these two scales [i.e., Newstrom and Rusch's (1975) measure and Bennett and Robinson's (2000) measure]. Participants reported the items using the same 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). 58.6% of these participants were female. Their average age and education were 33.0 years and 15.6 years. On average, they worked in their current organizations for 7.7 years. The results revealed that scores on Newstrom and Rusch's (1975) measure ($\alpha = .97$) were highly correlated ($r = .94$, $p < .001$) with scores on Bennett and Robinson's (2000) measure ($\alpha = .97$). Thus, Newstrom and Rusch's (1975) measure represents a suitable substitute for Bennett and Robinson's (2000) measure.

Given the consideration of CMV, we employed self-report deviant behavior as creativity was reported by supervisors. In addition, as some of deviant behaviors were private and unnoticeable, supervisors may not be in the best position to know employees' deviant behaviors. That is, supervisors may not be able to detect all the deviant behaviors of their employees. In this case, information about employee deviant behaviors would be missed. Also, despite that self-report measure may be biased (i.e., underestimated) due to social desirability, this underestimated measure provided a conservative test of our hypotheses. Furthermore, through a meta-analysis, Berry et al. (2012) found that "self- and other-report CWB [deviant behavior] exhibited very similar patterns and magnitudes of relationships with a set of common correlates…other-report CWB generally accounted for little incremental variance in the common correlates beyond self-report CWB. Although many have viewed self-reports of CWB with skepticism, the results of this meta-analysis support their use in most CWB research as a viable alternative to other-reports" (p. 613). Having taken all the arguments above into account, we finally decided to use self-report deviant behavior.

Control Variables

Similar to Study 1, subordinates' gender (female = 0; male = 1), age (in years), education (primary school = 1; junior high school = 2; senior high school = 3; junior college = 4; bachelor degree = 5; master degree or above = 6), tenure (in years), and job satisfaction were included as control variables (e.g., Bandura et al. 1996; Detert et al. 2008; Jones 2009; Kish-Gephart et al. 2010; Penney and Spector 2005). We assessed job satisfaction using Tsui et al.'s (1992) scale which was also employed in Study 1 ($\alpha = .83$). We also note that excluding these control variables (Meehl 1971) from hypotheses testing did not significantly change the results (including regression coefficients and significance levels) reported below. (These results are available upon request from the first author.) Similar to Study 1, controlling for the employee number evaluated by each supervisor and job category (i.e., classified as either technology-focused (coded as 1, 79.8% cases) or non-technology-focused (coded as 0, 20.2% cases) jobs) in Study 2 yielded similar results (including regression coefficients and significance levels) compared with those reported in Table 4. (These results are available upon request from the first author.)

Analytic Strategy

Similar to Study 1, HLM was adopted to analyze our group-nested (i.e., supervisor-nested) data in Study 2. The results of null model revealed that group accounted for 13.76% variance of moral disengagement and 6.67% variance of deviant behavior, and the Chi-square tests revealed that HLM was significantly better than the linear regression model (moral disengagement, $\Delta\chi^2 = 9.05$, $\Delta df = 1$, $p < .01$; deviant behavior, $\Delta\chi^2 = 4.31$, $\Delta df = 1$, $p < .05$). Thus, statistically, it is reasonable to use HLM to test our model. Also, the independent variables were grand-mean-centered (Hofmann and Gavin 1998; Raudenbush 1989) as in Study 1. We examined the "mediated moderation" hypothesis—Hypothesis 3—following Muller et al.'s (2005) procedures, which were able to address the defects of Baron and Kenny's (1986) approach.

Study 2: Results and Discussion

Table 3 presents the means, standard deviations, and correlations (i.e., did not take into account the non-independence within groups) of all studied variables in Study 2. Following the similar methods used in Study 1 (Little et al. 2002; Ou et al. 2014; Williams et al. 2009), CFAs were first conducted to examine the distinctiveness of the four variables studied in Study 2. The results revealed that the four-factor model fitted the data well [$\chi^2(146) = 381.88$, $p < .001$; RMR = .04, RMSEA = .07, CFI = .95, TLI = .94], better than the 3-factor model that combined moral disengagement and workplace deviant behavior [$\chi^2(149) = 1033.30$, $p < .001$; RMR = .09, RMSEA = .13, CFI = .81, TLI = .78; $\Delta\chi^2 = 651.42$, $\Delta df = 3$, $p < .001$], the 3-factor model that combined moral identity and moral disengagement [$\chi^2(149) = 481.19$, $p < .001$; RMR = .04, RMSEA = .08, CFI = .93, TLI = .92; $\Delta\chi^2 = 99.31$, $\Delta df = 3$, $p < .001$], the 2-factor model in which moral identity, moral disengagement, and workplace deviant behavior were combined [$\chi^2(151) = 1125.19$, $p < .001$; RMR = .08, RMSEA = .14, CFI = .79, TLI = .76; $\Delta\chi^2 = 743.31$, $\Delta df = 5$, $p < .001$], and the 1-factor model [$\chi^2(152) = 2068.64$, $p < .001$; RMR = .12, RMSEA = .19, CFI = .59, TLI = .54; $\Delta\chi^2 = 1686.76$, $\Delta df = 6$, $p < .001$]. These results suggested that these four variables were distinctive (Coovert and Craiger 2000; Hu and Bentler 1999).

In examining our hypotheses (see Table 4), we entered all the control variables in Model 5 and further entered creativity in Model 6. The results indicated that creativity was marginally significantly associated with moral disengagement ($\hat{\gamma} = .07$, $p < .10$).

Then, moral identity and its interaction term with creativity were included in Model 7, and the results revealed that the interaction term significantly predicted moral disengagement ($\hat{\gamma} = .18$, $p < .01$). We plot Fig. 3 to interpret this interaction. The further simple slope tests (Aiken and West 1991) showed that creativity significantly predicted higher levels of moral disengagement when moral identity was low ($\hat{\gamma} = .19$, $p < .01$), but not significantly when moral identity was high ($\hat{\gamma} = .02$, *n.s.*). Thus, Hypothesis 1 was supported in Study 2.

In Hypotheses 2 and 3, we propose that moral disengagement positively predicts workplace deviant behavior, and moral disengagement mediates the interactive effects of creativity and moral identity on workplace deviant behavior. As shown in Table 4, control variables were first added in Model 1 and creativity was further included in Model 2. The association between creativity and workplace deviant behavior was not significant ($\hat{\gamma} = .05$, *n.s.*). We examined the "mediated moderation" hypothesis following Muller et al.'s (2005) procedures. First, as illustrated above, moral identity significantly buffered the effect of creativity on moral disengagement. Second, the results of Model 3 indicated that moral identity significantly moderated the relationship between creativity and workplace deviant behavior ($\hat{\gamma} = -.23$, $p < .01$). The comparison analyses of simple slopes further showed that creativity was significantly related to workplace deviant behavior on when moral identity was low ($\hat{\gamma} = .20$, $p < .01$) rather than high ($\hat{\gamma} = -.06$, *n.s.*). This interaction effect is illustrated

Table 3 Means, standard deviations, and correlations of study variables in Study 2

Variable	M	SD	1	2	3	4	5	6	7	8
1. Gender	0.69	0.46								
2. Age	25.22	5.49	–.04							
3. Education	3.63	0.88	–.11*	.14**						
4. Tenure	2.18	1.93	.09	.44***	.14**					
5. Job satisfaction	3.37	0.69	.06	.11*	.15**	–.05				
6. Creativity	3.26	0.82	.18***	.14**	.17**	.21***	.15**			
7. Moral identity	3.62	0.57	–.11*	.08	.33***	.03	.08	.13*		
8. Moral disengagement	2.08	0.61	.24***	–.04	–.02	.03	–.21***	.10^{+}	–.16**	
9. Workplace deviant behavior	1.62	0.78	.16**	–.08	.00	–.03	–.21***	.05	–.20***	.52***

$N = 347$

$^{+}$ $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

in Fig. 4. Third, we included moral disengagement and the interaction term of moral disengagement and moral identity in Model 4. The results showed that moral disengagement significantly and positively predicted workplace deviant behavior ($\hat{\gamma} = -.58$, $p < .001$), and the effect of interaction term of creativity and moral identity became weaker and insignificant, from ($\hat{\gamma} = -.23$, $p < .01$) to ($\hat{\gamma} = -.13, n.s.$), suggesting that moral disengagement fully mediated the interactive effects of creativity and moral identity on workplace deviant behavior. Thus, Hypotheses 2 and 3 were supported in Study 2.

Similar to Study 1, we also conducted OLS analyses to test our hypotheses in Study 2. The results produced similar patterns compared with those reported above (including regression coefficients and significance levels; these results are available upon request from the first author); thus, our HLM results were robust.

It is worth mentioning that creativity marginally positively predicted moral disengagement in Study 2, but did not predict moral disengagement in Study 1. In other words, the main effect of creativity on moral disengagement did not appear to be stable in organizational settings. Therefore, we cannot conclude that creative employees are always more likely to morally disengage. A plausible explanation could be that employees' self-regulation process was affected by other individual and contextual factors in addition to creativity. That is why it is necessary to examine boundary conditions when exploring the dark side of creativity. As indicated in our two studies, introducing the moderating role of moral identity, we provided consistent and robust evidence that creative employees did not always make trouble. Specifically, creativity was likely to predict moral disengagement and subsequently deviant behavior only when one's moral identity was low rather than high.

General Discussion

Although the importance of creativity for organizational innovation and competitive advantages has been considered for several decades (Amabile 1983a, b, 1988; Zhou and George 2001; Shalley and Zhou 2008), the hidden costs of creativity have not received systematic attention. This research attempts to build upon and extend the growing yet still limited work on the dark side of creativity in organizational settings (Gino and Ariely 2012). Through two multi-source field studies, the findings provided strong evidence for our hypotheses regarding when and how creativity was translated into workplace deviant behavior. More specifically, in Study 1, we found that highly creative employees were more likely to morally disengage only when their moral identity was low. Study 2 not only confirmed our findings in Study 1, but also revealed that moral disengagement mediated the interactive effects of creativity and moral identity on workplace deviant behavior. The findings of our two studies generate several intriguing insights with valuable theoretical and managerial implications.

Theoretical Implications

The present study contributes to the existing creativity and workplace deviant behavior literature in several unique

Table 4 Hierarchical linear model results for all the hypotheses in Study 2: the effect of creativity on workplace deviant behavior

Variables	Workplace deviant behavior				Moral disengagement		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Intercept	1.62***	1.62***	1.63***	1.63***	2.08***	2.08***	2.09***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Gender	0.30***	0.29**	0.25**	0.08	0.34***	0.31***	0.29***
	(0.09)	(0.09)	(0.09)	(0.08)	(0.07)	(0.07)	(0.07)
Age	–0.00	–0.01	−0.00	−0.00	−0.00	−0.00	−0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education	0.07	0.06	0.11*	0.08^{+}	0.04	0.03	0.05
	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)	(0.04)	(0.04)
Tenure	–0.02	–0.02	−0.03	−0.02	0.00	−0.00	−0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Job satisfaction	–0.26***	–0.27***	−0.26***	–0.13*	−0.22***	−0.22***	−0.21***
	(0.06)	(0.06)	(0.06)	(0.05)	(0.05)	(0.05)	(0.05)
Creativity		0.05	0.07	0.02		0.07^{+}	0.08*
		(0.05)	(0.05)	(0.05)		(0.04)	(0.04)
Moral identity			−0.30***	−0.19**			−0.17**
			(0.07)	(0.07)			(0.06)
Creativity × moral identity			−0.23**	−0.13			−0.18**
			(0.09)	(0.08)			(0.07)
Moral disengagement				0.58***			
				(0.06)			
Moral disengagement × moral identity				0.01			
				(0.11)			
σ^2	.53	.53	.50	.40	.30	.30	.29
τ (intercept)	.02	.02	.01	.02	.03	.03	.03
Proportion within-group variance explained[a]		.00	.06	.25		.00	.03
N (level 1)	347	347	347	347	347	347	347
N (level 2)	89	89	89	89	89	89	89
Deviance[b]	778.44	777.66	755.97	677.89	599.70	596.52	580.86

The standard errors in the estimations are reported in parentheses

[a] The proportion of variance explained was calculated based on the parameters in Models 1 and 5, respectively

[b] Deviance is a measure of model fit; the smaller the deviance is, the better the model fits. Model deviance = −2 × log-likelihood of the full maximum likelihood estimate

$^{+}$ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

ways. First, this research has extended previous studies by arguing that not all creative individuals would make trouble. Recent research has uncovered the dark side of creativity that creative individuals are more likely to engage in unethical behaviors (Gino and Ariely 2012). However, based on moral self-regulation theory (Bandura 1991) as well as relevant moral literature (Aquino and Reed 2002; Greenwald 1980), we highlighted that creativity was not always associated with workplace deviance; instead, individual differences such as moral identity might influence the consequences of creativity. With two field studies using multi-source data, the results suggested that employee creativity did not have a significant main effect on their deviant behavior; instead, only when their moral identity was low were highly creative employees more likely to conduct workplace deviant behavior. In this sense, the findings have provided one of the first empirical evidences for the boundary conditions on the link between creativity and deviant organizational behavior. This effort responds to the call to explore boundary conditions of creativity—unethical behavior relationship (Gino and Ariely 2012), represented one of the first attempts at empirically and

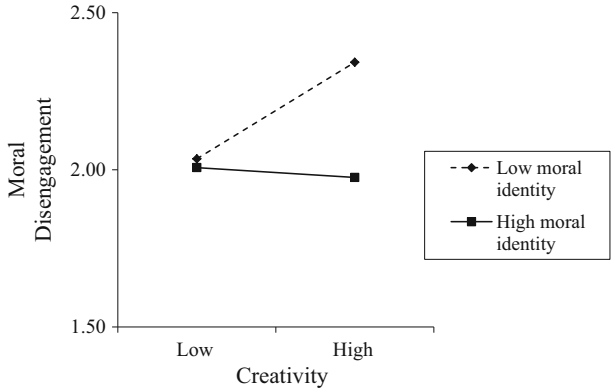

Fig. 3 Moderating role of moral identity on the relationship between creativity and moral disengagement in Study 2

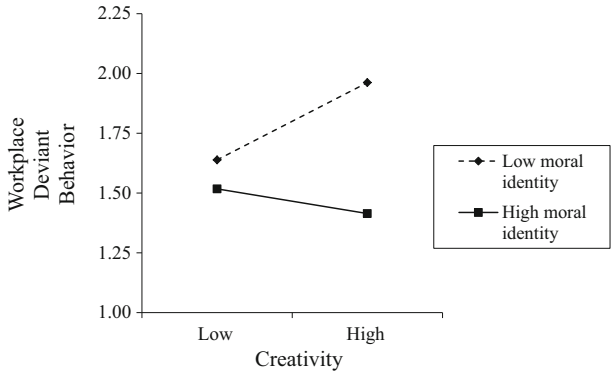

Fig. 4 Moderating role of moral identity on the relationship between creativity and workplace deviant behavior in Study 2

systematically exploring the potential costs of creativity at workplace, and helped deepen our understanding on how to avoid creative employees' negative aspects.

Second, building on moral self-regulation theory (Bandura 1991), we identify an important mechanism explaining the creativity–workplace deviant behavior link. Recently, Gino and Ariely (2012) argued that self-serving justification could explain the impact of creativity on dishonesty. Though with similar logics, our focus on moral disengagement offers a more comprehensive account to capture individuals' cognitive justification process that allows them to exhibit unethical behaviors without self-sanctions. Our research found that when moral identity was not central to one's self-view, creative employees were more likely to morally disengage and, in turn, were more likely to engage in workplace deviant behavior. Hence, our overall mediated moderation model suggested that moral disengagement mediated the interactive effects of creativity and moral identity on workplace deviant behavior. Prior literature on linking creativity and unethical behavior is silent about how the interactive roles of creativity and moderator (i.e., moral identity in our research) were transited to workplace deviant behavior. Using a unified mediated moderation framework, the current research addressed these concerns (Edwards and Lambert 2007; Muller et al. 2005) and provided a systematic examination of our proposed theoretical model. In particular, the identification of moral disengagement as an underlying process also suggests that other personalities or situational factors that lead to moral disengagement are likely to predict workplace deviant behavior. Further, incorporating self-regulation theory with creativity literature helps to exemplify self-regulation theory in organizations.

In addition, in order to deepen our understanding of this mechanism, we examined the underlying process directly through a *measurement-of-mediation* design (Spencer et al. 2005), while previous research employed a *moderation* design (Gino and Ariely 2012). Different methods of testing mediation have different advantages and disadvantages (e.g., "experimental manipulations [i.e., moderation designs] that are used in mediation analysis must affect one mediator without affecting others," Bullock et al. 2010, p. 556; also see Spencer et al. 2005); that is why scholars have begun to use them together (e.g., Chua 2013; Chua et al. 2012).

Third, while recent decades have witnessed a growing number of studies on antecedents of workplace deviant behavior, this research extends this body of work by examining creativity as a potential antecedent of workplace deviant behavior. Most of the extant work examining the antecedents of workplace deviant behavior was built on the perspective of negative reciprocity and regarded workplace deviant behavior as an affective and reactive response toward negative experiences at work (Fox et al. 2001). For instance, one stream of these studies identified abusive supervision as an antecedent to workplace deviant behavior (e.g., Mitchell and Ambrose 2007; Tepper et al. 2009). Also, some other streams explored the explanation power of personality traits (e.g., agreeableness and conscientiousness, Mount et al. 2006) in predicting workplace deviant behavior. However, our studies demonstrated that creativity may represent a salient driver of workplace deviant behavior under some conditions, enriching the existing literature on the antecedents of workplace deviant behavior. Moreover, our logics and findings may generalize to other job-related immoral behaviors at workplace (e.g., gossip behavior and unsafe behavior). For instance, highly creative employees with low moral identity may be able to generate justifiable reasons for their unsafe behavior (e.g., drinking behavior, which helps themselves relax). Thus, the present study contributes to literature through bridging these two important fields—creativity and workplace deviant behavior—of organizational behavior together, which are primarily considered and studied separately before.

Managerial Implications

As organizations strive to decrease employees' workplace deviant behavior, our findings provided several important implications for management practices. First, our findings indicated that highly creative employees compared with less creative employees might be more likely to enact workplace deviant behavior under some circumstances. Therefore, managers should recognize the potential costs of highly creative employees when stimulating creativity. For instance, in teams whose creativity is high, measures should be taken to prevent their potential workplace deviant behavior. Second, if possible, organizations can take into account the role of employees' moral identity when they select employees to conduct creative tasks, as we found that creativity did not predict moral disengagement when moral identity was high. In addition, given the importance of moral identity, organizations can consider launching training programs to foster development of moral identity (Zhu 2008). In this vein, organizations can help employees, especially those achieving high creativity, to self-regulate and in turn reduce the possibility of their workplace deviant behavior. Third, one important implication relates directly to employees' moral disengaging process. We found that moral disengagement mediated the interactive effects of creativity and moral identity on workplace deviant behavior. Accordingly, ethical measures and programs which are able to deter moral disengagement should be chosen to decrease workplace deviant behavior. In other words, through impairing employees' moral disengaging process, organizations can prevent creativity from transiting into workplace deviant behavior. For instance, cultivating a group climate valuing morality and ethics may reduce the room of employees' self-serving justifications and, in turn, decrease highly creative employees' workplace deviant behavior.

Strengths, Limitations and Future Directions

This current research has several desirable features. Specifically, it is one of the first attempts examining the potential costs of creativity at workplace, exploring the boundary condition, and unpacking the underlying mechanism. Furthermore, we conducted two field studies to replicate our core findings, using data collected in multi-time (Study 2) and multi-source manners (both Study 1 and Study 2). In spite of these strengths, the present research has a few limitations that imply promising avenues for future research. First, given that this research found moral identity was a boundary condition in linking creativity and moral disengagement (and workplace deviant behavior), one potentially fruitful direction for future research is to identify other moderators (Gino and Ariely 2012), especially those at the group level. For instance, ethical climate may serve as an interesting moderator. Ethical climate represents the collective moral reasoning of group members, providing group members a foundation for thinking about ethical issues and information (Arnaud and Schminke 2012; Victor and Cullen 1988). High levels of ethical climate may help creative employees to regulate their potential unethical behaviors and, in turn, lead them to be less likely to bypass moral rules and standards. This line of research "could be effectively used to combat the potential dark consequences of creativity" (Gino and Ariely 2012, p. 455).

Second, we identified moral disengagement as an underlying mechanism between creativity and workplace deviant behavior, but other mechanisms may also exist. For instance, one possible line of mechanism may be moral awareness or attentiveness, which has been regarded as key components to understand moral behaviors (Reynolds 2006, 2008). For instance, as Gino and Wiltermuth (2014) stated that "[a]lthough rule breaking carries a negative connotation in the domain of ethics, it carries a positive connotation in another well-researched domain: creativity" (p. 873), both creativity and dishonesty involve breaking rules. The attribute of breaking rules among highly creative employees may result in them less likely to recognize the morality nature (i.e., low moral awareness or attentiveness) under certain circumstances. That is, the inertia of highly creative individuals' rule-breaking makes them across ethical boundaries unconsciously. Low moral awareness or attentiveness positively predicted high unethical behavior (Reynolds 2006, 2008). Thus, it is theoretically reasonable that moral awareness or attentiveness mediates the impact of creativity on unethical behavior. Another possible mechanism would be the ability of finding loopholes. Specifically, divergent thinking and cognitive flexibility due to high creativity help individuals to find innovative loopholes for solving complicated and difficult problems. For instance, existing literature documented that compared with less creative cohorts, highly creative lawyers typically exploit the law's loopholes and ambiguities for their clients even when it entails crossing moral boundaries (McBarnet 1988; McBarnet and Whelan 1991). Similarly, Wang (2011) found that after creativity priming, individuals cheated creatively through taking advantage of loopholes. Thus, creative individuals are more likely to find and use loopholes (McBarnet 1988; McBarnet and Whelan 1991; Wang 2011), and one typical example of these loopholes-exploiting actions is deviant behavior. In sum, more research is needed to investigate other plausible underlying mechanisms which link creativity and deviant behavior.

Third, another promising avenue for future research is to explore the effect of creativity on some other unethical but beneficial (or neutral) work behavior, rather than workplace deviant behavior. Prior studies have recognized that employees sometimes perform unethical pro-organizational

behavior, which is defined as unethical acts with the intent to benefit their organizations, members, or both (Umphress and Bingham 2011). While previous work focused on theoretically and empirically examining how and when employees behave unethical behaviors for self-servings but hurting organizations and their members, it is also important to understand why and when employees do "bad things for good reasons" (Miao et al. 2013; Umphress and Bingham 2011; Umphress et al. 2010). According to the reasoning and findings of our two studies, we suggest that highly creative employees are also more likely to enact unethical pro-organizational behavior through the moral disengagement process. Furthermore, it is promising to explore the impact of creativity on workplace "gray-zone" behaviors (e.g., unsafe behavior). While creativity may improve one's safety knowledge and ability, it is likely to impair his or her safety motivation through self-serving justification and, in turn, leads to more unsafe behavior at workplace (Christian et al. 2009).

Fourth, while the current research examined the role of creativity in predicting workplace deviant behavior in two field studies, the causality may not be inferred. Besides, we acknowledge that it is possible that high levels of creativity and deviant behavior might actually result from some organizational- or group-level factors (e.g., fewer rules, less monitoring). However, both Study 1 and Study 2 were conducted in a single company, respectively, in which the organizational-level variables (e.g., rules, monitoring, norms, climate) were the same. Thus, the samples selected helped to control for the potential organizational variance. To further rule out this possibility, especially the potential effects at the group level, our research took some rules-/control-/monitoring-relevant variables (i.e., group innovation climate, group ethical climate, group ethical efficacy, authoritarian leadership, and personal control in Study 1; group innovation climate and ethical leadership in Study 2) into account.[2] The results revealed that even controlling for these factors, our findings still remained consistent. (These results are available upon request from the first author.) Therefore, the hypothesized relationships regarding creativity, moral disengagement, and deviant behavior are robust and not by-products of something else. Moreover, we suggest future research should employ field experiments to establish the causality and rule out other potential influential factors. For instance, scholars might firstly manipulate the level of employee creativity by initiating creativity training courses in the experimental group but launching regular training courses in the control group, and then measure and compare their respective moral disengagement and workplace deviant behaviors. Furthermore, the reversed relationship may also exist. In other words, it would be beneficial to examine the role of workplace deviant behavior in predicting creativity. We recognize that unethical behavior and creative behavior share some characteristics (i.e., involve breaking rules, Cropley et al. 2008; Gino and Wiltermuth 2014; Sternberg and Lubart 1995; Sulloway 1996). Gino and Wiltermuth (2014) suggested and found that high levels of dishonesty were also likely to lead to higher levels of creativity through a heightened feeling of being unconstrained by rules. It is worth investigating whether, how, and when workplace deviant behavior may lead to creativity in future research, allowing organizational to utilize the potential benefits of workplace deviant behavior.

Finally, although the samples of our two studies were from China, the theoretical logics and arguments were not culturally specific. Our findings largely generalized the research on dark side of creativity mostly derived from Western settings (e.g., Gino and Ariely 2012) to an Eastern culture. Nonetheless, we also recognized that there were numerous creativity-relevant differences between Easterners and Westerners (Morris and Leung 2010; Ng 2001). Thus, we encourage future research to examine how cultural differences may play a role in these relationships and to replicate our findings in other cultures and contexts. Further, although our findings were replicated in both banking (Study 1) and manufacturing industries (Study 2), they may not be totally representative of the population of working adults in China. For instance, although creativity is critical for banks and manufacturing firms, their employees may be different from employees in other organizational settings (e.g., information technology (IT) firms, which emphasize creativity more). Thus, we suggest future research to address whether our findings hold across other occupational contexts and further improve the generalizability of the findings. Furthermore, despite that we followed the principles of triangulation (Bickman et al. 1998; Jick 1979) to intentionally use two different but both widely accepted creativity measures in our research, one anonymous reviewer raises an important and interesting question: How is Oldham and Cummings's (1996) creativity measure different from Zhou and George's (2001)?

[2] These variables were included mainly because (1) they represent the rules, control, and monitoring at the group level and (2) they have potential impacts on creativity or deviance. For example, group innovation climate implies less control and monitoring and was found to be influential on creativity (Somech and Drach-Zahavy 2013), while ethical climate and group ethical efficacy (i.e., more rules) were critical situational factors that might influence deviant behaviors (Arnaud and Schminke 2012; Chen et al. 2013). Besides, authoritarian leadership representing the leader's "absolute authority and control over subordinates and demands unquestionable obedience from subordinates" (Cheng et al. 2004, p. 91) and personal control (i.e., less monitoring) were also found to impact creativity (Liu et al. 2011; Zhang et al. 2011). In addition, similar to ethical climate, ethical leadership (i.e., more rules and standards) was chosen as a control variable because it might act as a critical situational factor that impacts deviant behaviors (Brown and Treviño 2006; Ng and Feldman 2015).

This question has not been discussed in existing literature. Addressing this question can help scholars make more informed decisions when choosing among different creativity measures. Therefore, while calling for future research to replicate our findings using the same creativity scale, we also encourage scholars to compare the two different creativity measures in greater depth.

Conclusion

The present research attempts to examine when and how creativity is related to workplace deviant behavior at workplace. Drawing upon moral self-regulation framework (Bandura 1991), we propose and found that creative employees did not always make trouble. Specifically, employees' creativity and moral identity interacted to influence their workplace deviant behavior through moral disengagement. Our findings provided some initial evidence of potential hidden costs of creativity by employees of low moral identity, especially in organizational settings. We call upon scholars to continue the promising and fruitful research in this direction. A systematic and deepening understanding of creativity's potential negative consequences is a necessary step toward avoiding unintended costs of creative sparks.

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Compliance with Ethical Standards

Conflict of interest All the authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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