Creativity as a pragmatic moral tool

Wang, Long

Published in:
Journal of Business Research

Published: 01/03/2019

Document Version:
Post-print, also known as Accepted Author Manuscript, Peer-reviewed or Author Final version

Published version (DOI):
10.1016/j.jbusres.2018.10.009

Publication details:
Wang, L. (2019). Creativity as a pragmatic moral tool. *Journal of Business Research*, *96*, 1-13. https://doi.org/10.1016/j.jbusres.2018.10.009

Running Head: Creativity and Morality

Creativity As A Pragmatic Moral Tool**

Long Wang

Department of Management

College of Business

City University of Hong Kong

longwang@cityu.edu.hk

Phone: 00852-3442-7181; fax: 00852-3442-0309

Acknowledgement: The work described in this paper was fully supported by a grant from the Research Grants Council of the Hong Kong Special Administrative Region, PR China (Project No: CityU 21501214).

CREATIVITY AS A PRAGMATIC MORAL TOOL

ABSTRACT

Although creativity is a truly desirable and often scarce commodity in organizations, its moral implications have not been fully explored. This research takes a new approach to investigate creativity as a moral tool, predicting that creativity generates pragmatic solutions by stimulating both unethical rule circumvention and ingenious escapes from immoral rules. The results from four complementary studies support these predictions. Specifically, Study 1 showed that when people were creative, they did not violate rules directly; instead, they were more likely to ingeniously use loopholes to circumvent the rules. Studies 2 and 3 showed that when people were creative, they circumvented moral and immoral legal ordinances for different moral motives; they also approved of moral rule circumvention more than similarly creative but immoral rule circumvention. Finally, Study 4 suggested that experiencing more workplace creativity was related to justifications of morally debatable issues (e.g., euthanasia and homosexuality) but not justifications of clearly immoral issues (e.g., bribery and cheating). The discussion section explores the theoretical and practical implications of these findings.

Keywords: Creativity, Morality, Decision-making, Right-Wrong versus Right-Right Moral Issues.

CREATIVITY AS A PRAGMATIC MORAL TOOL

1. Introduction

King Friedrich Wilhelm II forced Immanuel Kant to pledge to refrain from giving public lectures on religion. Knowing that the king would not live much longer, Kant used a clever evasion in his pledge to implicitly suggest that he would only be bounded by the unwilling promise if the king was still alive. With this creative but misleading truth, Kant fulfilled his own moral duty to remain honest. In sharp contrast, during his first presidential campaign, former U.S. President Bill Clinton carefully crafted a technically true response to a question concerning his use of recreational drugs by replying that he had never broken the antidrug laws of his country or state: he had used marijuana while he was a student in England (Sandel, 2009), albeit without inhaling. With his misleading answer, Clinton creatively denied his moral responsibility.

These two examples illustrate a common phenomenon: people take creative approaches to problems that have moral connotations by neither exactly lying nor exactly telling the whole truth. They also suggest that by being creative, people can generate ingeniously pragmatic solutions to traditional moral problems although their moral intent can vary from each other (e.g., violate versus maintain moral principles). A combination of pragmatism and creativity may be a potent tool for solving vexing moral problems. However, research has rarely investigated creativity as a moral tool, as the series of studies described in this paper does.

A relatively small but growing body of literature suggests that there is an inherent tension between morality and creativity because morality is conventional and creativity is unconventional (Cropley, Kaufman, & Cropley; 2008). In particular, creativity's connection with nonconformity to tradition and convention (Kneller, 1965) suggests that the dark side of creativity implicitly, or even explicitly, encourages immoral behavior (Baucus, et al, 2008; Gino

& Ariely, 2012; Vincent & Kouchaki, 2016; Wang, 2011). The opening examples, however, suggest that this intuitive view fails not recognize that people can use creativity for completely different moral purposes. For instance, whereas Clinton's creative response was to deny his legal and moral responsibility, Kant's creative evasion was to fulfil his moral duty while avoiding too blatant and costly confrontation. Thus, creativity does not always conflict with morality and may also lead to novel and unconventional practices that exhibit an increase in morality, e.g., Mahatma Gandhi's civil disobedience movement, especially when convention is unjust and immoral (Brower & Stahl, 2011; Runco, 2009; Wolpert, 2002). In particular, when people creatively go against immoral rules, they often reject wrongful social rules and norms to satisfy an alternative, often a higher level of moral principle.

In addition, the view that creativity encourages immoral behavior does not necessarily capture the potentially complex relationship between creativity and morality (Bierly, Kolodinsky & Charette, 2009) because it simply considers morality as conventional and creativity as unconventional (Runco, 2009; 2010). As Csikszentmihalyi (1996) noted, "it is difficult to see how a person can be creative without being both traditional and conservative and at the same time rebellious and iconoclastic (p.71)." Logically speaking, both creative and uncreative behavior can be either moral or immoral: morality does not, by necessity, always contradict creativity (Runco, 2009; Wang & Murnighan, 2015), especially when immoral behavior is clearly wrong and unacceptable. For example, many blatant moral violations, such as lying and cheating are mundane, unoriginal, and require little or no creativity. It has also been found that violating socially imposed rules is related to less rather than more creativity (Eisenman, 1992; 1999). Thus, creativity does not necessarily increase moral violations, especially those routine violations that are clearly wrong and unoriginal.

The current research takes a new approach to investigate the relationship between creativity and morality. I suggest that creativity does not necessarily increase immoral behavior such as outright violations of moral rules or norms, especially when the immoral behavior is unambiguously unacceptable. Instead, people often use creativity to craft original solutions that balance different moral motives and, at least obliquely, respect basic moral laws and values. In particular, creativity may lead people to explore novel, and previously untapped moral possibilities to pragmatically tackle difficult moral problems (Dewey, 1981; 1987; Fesmire, 2003). In addition, I propose that the flexible logic of moral creativity should increase people's inclinations to support morally debatable behavior rather than morally wrongful behavior because the former involves new but conflicting moral values and the latter is clearly an unoriginal and ostensibly offensive moral violation. These new perspectives are important because they go beyond the intuitive view that morality is conventional and creativity is unconventional. They also provide new insights into the moral implications of creativity by more accurately connecting the nature of creativity with morality.

I used a triangulation of methods to include both experimental and survey studies to test my predictions. The four complementary studies operationalized creativity in two different ways: the first three lab and online experimental studies used different psychological approaches (e.g., Brendl, et al., 1995; Roney, et al., 1995, Vohs, et al, 2006) to either explicitly or implicitly prime people to be momentarily creative; the last survey study measured the degree of creativity that employees' work required chronically. Specifically, Study 1 showed that creativity primes did not increase direct violations of the rules; instead, they stimulated people to take advantage of systemic loopholes to ingeniously circumvent the rules. Study 2 and 3 demonstrated that priming creativity led people to exploit a systematic loophole in both moral and immoral ways. In

addition, both studies showed that creativity increased the likelihood that people would approve of moral rule circumvention more than immoral loophole taking. Finally, Study 4 used the data of 4,833 managers and business professionals from 20 countries to show that job-required creativity was positively related to people's support of behavior whose morality some might question (e.g., abortion and euthanasia) but was not related to behavior that is clearly wrong and/or immoral (e.g., cheating and accepting a bribe).

2. Theory and Background

2.1. Creativity and variation

Almost everyone has some spark of creativity that can be applied to all types of activities (Torrance, 1967; Torrance, Clements, & Goff, 1989; Torrance & Torrance, 1973), but creativity is not always readily available unless successfully activated. Historically, researchers have investigated creativity as an outcome, a process, or the integration of the two (Amabile, 1983; Shalley & Zhou, 2008). As an outcome, creativity is often described as the generation of a novel and useful product, idea or solution (e.g., Amabile, 1983; Barron, 1969; George, 2007). Creating such a product requires special cognitive processes, which often involve variation and retention (Campbell, 1960; Simonton, 1999), with variation contributing primarily to novelty and retention contributing primarily to usefulness (Amabile, et al, 2005). Although both are important, novelty is often treated as creativity's more important, distinguishing feature (Amabile, 1996; Amabile, et al, 2005). In particular, the common view of creativity suggests that to create novel ideas, people need to engage in variation to break their traditional approaches to a problem to restructure what might have seemed irrelevant (Koestler, 1964; Newell, Shaw & Simon, 1962), free themselves from traditional constraints (Kirton, 1976; Runco, 2004a), and think out of the box to break common assumptions and rules (Adams, 1963; Schuldberg, 1997).

2.2. Morality and creativity

This research focuses on creativity as a cognitive process, in which people develop novel and useful solutions to their problems and decisions (Amabile, 1983; Shalley & Zhou, 2008). Because everyone has creative potential (Runco, 2004b), I suggest that once creativity is activated, it can be used as a moral tool in moral decision-making. In particular, I investigate how activating creativity or a creative mindset may help people generate different moral solutions to different kinds of moral problems.

Although "radical novel" ideas (Barron, 1969) can lead to unexpected behaviors or even serious moral concerns (Baucus, et al, 2008; Akerlof & Shiller, 2009), the argument that creativity, because of its cognitive variation, unselectively encourages immoral behavior is theoretically incomplete (Runco, 2010; Wang & Murnighan, 2015). The argument is intuitively appealing because creativity can free people from traditional conceptual boundaries (Adams, 1963; Runco, 2004; Schuldberg, 1997), encouraging them to challenge traditions, rules, and norms. In other words, thinking outside the box encourages people to violate rules and morality because creativity is unconventional and morality is conventional.

However, rule or moral violations can also take conventional or unconventional forms. As the common saying goes, rules are made to be broken. In the absence of adequate monitoring and punishment, people violate rules and morality all the time for a variety of reasons. Yet, many of their rule or moral violations are simply mundane and unoriginal. For example, a decade of research on cheating in academic institutions suggested that student cheating is widespread and increasing (McCabe, Treviño, & Butterfield, 2001). A large portion of students violated academic honesty (e.g., Brown, Weible, & Olmosk; 2010; Jones, 2011), but no evidence suggests that these students are creative or their cheating involves creativity. Similarly, Eisenman

(1992; 1999) found that prisoners are often uncreative although they dislike socially imposed rules and their criminal career often involves different kinds of cheating and rule-breaking. Indeed, many instances of outright moral violations and blatant cheating do not share anything in common with creativity. Thus, it seems convenient but questionable to simply argue that creativity always encourages immoral behavior because it goes against conventions.

In addition, creativity can also have positive moral consequences when societal moral norms are wrong. For example, the creative acts or discoveries of Bruno, Gandhi, Galileo, and Martin Luther King, Jr. led them to be jailed or persecuted (Brower & Stahl, 2011) mainly because they deviated from moral or social norms of the society, which were immorally misguided (Runco, 2009). As Henry David Thoreau claimed in *Civil Disobedience*, "under a government which imprisons any unjustly, the true place for a just man is also a prison." When dominant moral norms are wrong, creative nonconformity can actually lead to more rather than less moral behavior, e.g., Mahatma Gandhi's civil disobedience movement (Brower & Stahl, 2011; Runco, 2009; Wolpert, 2002).

Thus, creativity and morality do not necessarily conflict each other in a negative manner. Runco's (2009) two-continuum theory of creativity and morality suggests four major possible relationships between creativity and morality: creative/moral behavior, creative/immoral behavior, uncreative/moral behavior, and uncreative/immoral behavior. Drawing on this framework, Wang & Murnighan (2015) suggested that creativity should be more related to creative/moral and creative/immoral behavior than uncreative/moral and uncreative/immoral behavior, as many moral or immoral behaviors (e.g., following laws or lying to deny wrongdoing) are often the easiest, most available and routine decisions that require little or no creativity. When people are uncreative, they often either follow or violate the rules (regardless of

whether the rules are moral or not). Creativity, however, allows people to think outside the box and go beyond mundane routines to solve moral problems (Mumford, et al., 2010), often in a novel and pragmatic manner. This process is essential to understanding the relationship between creativity and morality.

2.3. Rule violations versus circumventions

In essence, the aforementioned logic suggests that creativity often serves as a pragmatic tool for traditional moral problems. Although creativity often motivates people to think outside the box, it does not indiscriminately endorse all types of immoral actions. In particular, creativity should not increase the likelihood of engaging in clearly wrong actions (e.g., *direct rule violations or blatant cheating*) because these actions are often both unoriginal and objectionable; instead, it should be more likely to encourage moral innovations that only diverge slightly from straight-and-narrow moral requirements, particularly those small moral deviations that are not particularly obnxious but provide outcomes that rules and principles would otherwise constrain.

Rule circumvention is a typical example. Unlike direct moral violations, circumventing rules or regulations such as exploiting loopholes, often requires ingenuity and represents a much less severe moral offense than blatant rule violations. Creativity should facilitate this process in two ways. First, creativity can help people discover ambiguities or the inadvertent limitations of a rule or regulation. Original, divergent, and flexible thinking, for instance, can help people explore untouched, morally “grey” areas, which can be difficult to identify without thinking outside the box. Second, unlike blatant transgressions or violations, exploring morally grey solutions also, however obliquely, pays some homage to the rules. Thus, when moral innovation is not entirely consistent with moral canons, people should be more likely to engage in minor

acts of deviant behavior that takes advantages of the imperfection of rules and regulations but are unlikely to engage in outright violations (Bierman, Smoot, & Aumiller, 1993).

In essence, because creativity encourages outside-the-box thinking, the special cognitive process of creativity should broaden or enlarge the set of moral options that people may imagine when they face a moral problem. I suggest that creativity only prompts moral innovations when people find novel and unusual moral grounds that balance different moral motives. Such moral innovations often involve circumvention rather than outright violation of any moral rules and principles. Thus, my proposal is different from the view that creativity unselectively encourages immoral behavior.

H1: Activating people's creativity will increase the likelihood that they circumvent rather than directly violate rules or principles.

2.4. Immoral versus moral rule circumvention

Depending on the situation, rule circumvention may be moral or immoral. On the one hand, rule circumventions can be immoral and illegal. For example, people and companies often exploit loopholes in the tax code to minimize their taxes; they also frequently take advantage of legal loopholes to circumvent rules and regulations in areas fraught with ethical and legal complications. On the other hand, legal rules and social conventions do not always align with strict standards of right and wrong (Turiel, 1983). When religious beliefs interfere with the administration of medical assistance for children, for instance, two sets of moral standards clash. Thus, people may also consciously deviate from generally accepted societal rules to satisfy their own (rightful) moral position. In particular, when a society's norms or conventions are inappropriate and/or indefensible (e.g., Martin Luther King's exhortation to follow only just laws and openly and loudly flout unjust laws), creative deviations can lead to moral innovations in

favor of higher moral standards. Creative passive resistance, for example, allowed Gandhi to rebel without violating his pacifist values (Runco, 2009; Wolpert, 2002).

Circumventing unjust rules or laws clearly differs from exploiting or manipulating loopholes to avoid just rules and laws because these two actions result from markedly different moral intentions. The former rejects wrongful rules or social norms to satisfy a higher moral principle; the latter has little or no moral grounding but is, instead, a violation of appropriate moral principles. Although people often attempt to defend immoral behaviors (Ashford & Anand, 2003; Bandura, 1999), they can more easily preserve a moral self-image (Aquino & Reed, 2002; Murnighan, Oesch, & Pillutla, 2001) when they circumvent inappropriate rules to be consistent with moral precepts. Thus, although creativity may increase different kinds of rule circumventions, people should consider rule circumventions as more acceptable when they circumvent immoral than moral rules.

H2: When creativity is activated, people will be more likely to approve of rule circumvention when its intent is to satisfy an alternative (higher) moral principle than when the intent is to violate an appropriate moral principle.

2.5. Right-wrong versus right-right moral issues

The discussion to this point has suggested that creativity can be a double-edged sword, leading to either lower moral or higher amount of moral deviations, depending on whether the social rules and conventions are appropriate and defensible. Moral attitudes toward moral versus immoral deviations are likely to differ markedly; thus, understanding the relationship between creativity and morality also requires a further investigation of different types of moral issues.

Although morality is often concerned with how to define right and wrong (Beauchamp & Bowie, 2004), the nature and broad range of moral dilemmas includes both right-wrong and

right-right decisions (Kidder, 2009). Right-wrong decisions present a test of moral character as the wrongs (e.g., cheating or lying to get ahead) are a breach of basic moral values (e.g., integrity and honesty) or rules (e.g., thou shalt not cheat). Organizational scandals like Bernie Madoff, Enron, and World.com are all examples of breaches of morality in right-wrong decisions. In contrast, right-right decisions are moral dilemmas that involve two or more competing moral values (Kidder, 2009). Kohlberg's (1958) classic example, for instance, asked people whether a desperate husband should steal an unaffordable drug to save his wife's life. In organizations, managers may need to choose whether to punish a loyal employee's transgression (justice) or forgive it (mercy) (Wang & Murnighan, 2017). Moral dilemmas like these often invoke multiple, sometimes conflicting, moral values, making "one right answer" elusive.

Understanding the relationship between creativity and right-right dilemmas is critical but challenging. In particular, because right-right dilemmas differ significantly from right-wrong dilemmas and tend to vary from one type of right-right dilemma to another, it is extremely difficult if not entirely impossible to empirically compare the effects of creativity on people's decisions to navigate these myriad types of moral dilemmas. Thus, the current research primarily tests creativity's relationship to people's moral perceptions and justifications of clearly immoral issues versus morally debatable (right-right) issues.

Although creativity may help people justify their actions in both right-wrong and right-right moral dilemmas, the fact that right-right dilemmas are more ambiguous than right-wrong dilemmas suggests that creative moral reasoning would have stronger effects for right-right dilemmas. In particular, people's choices in right-right dilemmas are likely to be open to greater controversy, which should be more easily resolved with creative moral reasoning. Right-wrong moral dilemmas, in contrast, represent clear deviations from moral rectitude: people are often

clear in their understanding of the boundaries between right and wrong. As a result, although they might be able to justify small misdemeanors, justifying more serious immoral actions is considerably more difficult (Schweitzer & Hsee, 2002; Schweitzer, Ordoñez, & Douma, 2004). This difference suggests that people will be less likely to use creativity to justify immoral transgressions, particularly those that clearly violate core moral principles. Instead, creativity should be most relevant and most useful for justifying unconventional moral decisions in right-right moral dilemmas, which typically involve conflicting moral values or new moral issues.

H3: Creativity will be more related to justifications of morally questionable behavior in right-right decisions than clearly immoral behavior in right-wrong decisions.

3. The Current Research

The current research used both experimental and archival data to investigate the relationship among creativity, moral decisions, and perceptions. In four complementary studies, I used a triangulation of methods to include both tightly controlled lab and online experiments and survey data to overcome the potential limitations and biases of single method approaches (Hussey, & Hussey, 1997). The four studies operationalized creativity in two different ways. In the first three lab and online experimental studies, I used both direct and implicit manipulations (e.g., Brendl, et al., 1995; Dijksterhuis & Bargh, 2001; Roney, et al., 1995, Vohs, et al, 2006) to prime people to be creative to test how activating a creative mindset might affect people's rule circumvention versus violation when they faced moral versus immoral rules. Extending the results of the first three studies, I suggested that some employees may be required to activate and use their creativity more than others in the workplace. Thus, I also used the survey data to test how people's routine activation or use of creativity in the workplace may be related to their ethical perceptions of different kinds of moral issues.

Specifically, Study 1 tested H1 by priming people's creativity to experimentally investigate how activating a creative mindset was related to rule circumvention in people's right-wrong moral decisions. Study 2 and Study 3 went beyond right-wrong moral situations by examining how creativity was related to different moral intents. Study 2 and Study 3 used two types of different creativity primes to test both H1 and H2 by investigating how activating a creative mindset affected people's reactions to moral versus immoral rule circumvention. Finally, Study 4 extended the first three studies and tested H3 by investigating the relationship between workplace creativity and people's ethical perceptions of right-right versus right-wrong moral issues.

3.1. Study 1

Study 1 was designed to investigate the behavioral effects of creativity on immoral deviance in a right-wrong moral decision setting. By including ambiguity in the rules, the study used a tightly controlled lab experiment to behaviorally investigate how activating creativity influenced rule circumventions versus direct rule violations.

Many scholars (e.g., Maslow, 1967; Rogers, 1971; Stein, 1974; Torrance, 1967; Torrance, Clements, & Goff, 1989; Torrance & Torrance, 1973) have suggested that the activation of creativity will lead people to be creative. Research has also shown that priming, even subliminal priming, can influence people's behaviors (e.g., Dijksterhuis & Bargh, 2001; Murphy & Zajonc, 1993). Thus, Study 1 used a standard psychological method (e.g., Brendl, et al., 1995; Roney, et al., 1995; Wang, Zhong, & Murnighan, 2014) to prime creativity to investigate its effects on rule-circumventions and rule violations.

3.1.1. Design and experimental procedure

A total of 120 undergraduates (60% female, averaging 19.51 years of age) from a Midwest university in the U.S. received $8 for participating plus a $10 performance-contingent bonus. The participants were randomly assigned to one of two priming conditions (creativity versus control). They sat in private break-out rooms and were told that the experiment would include a series of unrelated tasks. The first task was either the creativity or the control prime.

Priming creativity. In the creativity manipulation, participants read an excerpt from a chapter of a decision making textbook that included a classic creativity problem. The answer was shown on the next page and follow-up paragraphs described why people usually failed to solve this type of problem and what was required to be creative. In the control condition, participants read an essay of similar length on how to take good photographs in difficult lighting conditions; the essay started with good and bad examples of photographs and provided tips on possible lighting adjustments.

A pretest of the priming tasks (with a different sample of 106 participants from the same subject pool) suggested that the creativity priming task led people to feel more creative (M=5.11, SD=1.37 vs. M=4.28, SD=1.54, t (1, 104) =2.94, p<.01) and to perform better in the Remote Associates Task (RAT), a common measure of creativity (Mednick, 1962) (M=6.23, SD=2.58 vs. M=5.17, SD=2.52 (out of ten items); t= (1,104) =2.14, p<.05).

Follow-up tasks. After answering manipulation check questions, the participants moved to their second task, which was designed to reduce the potential demand characteristics of the previous primes and provide everyone a reasonable opportunity to access the Excel program on the computer. The task was ostensibly described as a decision-making task about an imagined business case. The instructions asked the participants whether they would be interested in using a new computer package that resembled Excel. The participants first indicated how often they used

Excel and their skill level with the program. Then, they were asked to imagine that Microsoft had created a new Excel program that was powerful but time-consuming to learn. They then indicated the likelihood that they would switch to this new program. Next, the participants were asked to use an Excel spreadsheet. Following that, they were asked to imagine the new version of the Excel program and again indicated how likely they would switch to it. Finally, they answered several filler questions about their coursework, English and math abilities before being introduced to task #3, which was framed as the next irrelevant task. Unknown to the participants, the previous task provided participants the same opportunity to access the Excel program on the computer, which they could potentially use to take advantage of a loophole in task #3.

The central decision task. Framed as a completely irrelevant task, task #3 asked participants to use manual calculation to solve as many of 15 complicated math problems as possible; each succeeding problem increased in difficulty. Participants would receive a $10 performance bonus if they could correctly solve 12 or more in 10 minutes or less. A pretest indicated that nearly 95% of the people took at least 20 minutes or longer to manually calculate 12 problems correctly.

The participants also received a calculator; the instructions indicated that they could use the calculator for only one problem of their choosing. The task was repeatedly described as *manual calculation* and the instructions specified that using the calculator more than once violated the rules and would affect the study's results. In addition to the written instructions, the experimenter explained the task and the rules again before the participants began.

3.1.2. Measures of blatant rule violations versus rule circumventions

Videotapes of the participants completing the task allowed me to detect later if participants had directly violated of the rules. It was coded as direct rule violations if they used the calculator more than once to break the rules.

Participants could circumvent the rules creatively by using the Excel program on the computer in their room because the instructions only restricted their use of the calculator provided. Although the task was clearly described as manual calculation, the rules did not mention the computer or Excel as prohibited problem solving aids. Also, the participants' previously irrelevant task provided everyone the same access to the Excel program, making it possible for them to consider using Excel as a method of rule circumvention for a completely different decision task. (As expected, using Excel was also the most frequent method of rule circumvention.)

In addition, a few participants used the calculator on their cell phone if they had one; a couple of them broke down the original problems into sub-problems and used the calculator to solve the sub-problems rather than the original problems. All of these behaviors were coded as rule circumventions.

3.1.3. Results

Following standard procedures in social psychology, I first performed a manipulation check and then analyzed the effects of creativity priming on rule circumventions and violations. First, the analysis of the manipulation checks indicated that the creativity prime was effective: similar to the pretest, participants reported that their priming task (M= 5.26, SD= 1.03) was more useful in promoting creative thinking than the control prime task (M= 3.73, SD =1.34; t (1, 118) = 6.84, p<.001). Second, as predicted, the creativity prime led to significantly more rule circumventions than the control prime did: 19% (n=53) vs. 6% (n=67); χ^2 (1, N=120) = 4.78, p<.05. In contrast,

the creativity prime did not increase direct rule violations: it actually led to fewer, but not significantly fewer direct violations than the control prime (9% vs. 16%; χ^2 (N=120) = 1.25, p=.26). Thus, the results supported H1: prompting creativity resulted in a greater number of instances of rule circumventions but no increase in direct rule violations.

3.1.3.1. Preliminary qualitative results

In addition to quantitative analyses, I qualitatively analyzed the post hoc responses of a small number of participants. At the end of the experiment, I randomly and informally interviewed 9 participants who had circumvented the rules and 4 participants who directly violated the rules[1]. Although the instructions clearly indicated that the task was about manual calculation, 6 out of the 9 participants, who had circumvented the rules, provided creative justifications for their rule-circumventions, in two general ways. The first interpreted the meaning of "manual calculation" creatively, for example, using Excel qualified as manual calculation. For example, one participant said: "I manually entered data." Another said, "Manual calculation is not about pencil and paper calculation." The second type either challenged part of the rule or argued that the rule was not violated, for example, "The rule is about ***the*** calculator, not a calculator;" or "I broke down the questions into different parts. They are no longer the original questions. So, I did not use the calculator for more than one question." In contrast, none of the 4 participants who blatantly violated the rules could provide valid or reasonable justifications for their violations of the rule.

In sum, the preliminary interview results suggested that the creativity prime helped people to think flexibly and use morally grey solutions they seemed to think were less morally offensive

[1] Although the interviews were conducted in an informal and confidential manner, the participants who directly violated the rules typically showed certain degree of discomfort. Thus, I only randomly interviewed 4 participants who violated the rules and stopped my interviews thereafter.

than direct violations of the rules, i.e., they found some non-embarrassing justifications or excuses for their rule-circumventions.

3.1.4. Discussion

Prompting people to be creative increased rule circumventions but it did not increase the likelihood they would directly break the rules. This supports H1, suggesting that creativity prompted ingenious, somewhat indirect rule circumventions. But it did not increase the frequency of direct rule violations (e.g., uncreative cheating).

These results provide initial evidence on the relationship between creativity and moral decision making in right-wrong decisions. The decision task clearly included ethical elements, allowing people to either break the rules to make more money or maintain a position of moral integrity, and most of the participants did not violate the rules. When the participants were primed to be creative, they tended to circumvent instead of breaking the rules to obtain higher economic payoffs. This indicates that a creativity stimulus can lead to pragmatic search for a moral middle ground.

This first study, however, only investigated how creativity affected people's responses to a simple rule. Study 2 extended the investigation by comparing people's creative solutions when they faced both moral and immoral rules. In doing so, Study 2 tested H1 in two different aspects: on the one hand, activating creativity may have a negative effect on people's moral choices when they circumvent moral rules; on the other hand, activating creativity may also have a positive effect on people's moral choices when immoral rules conflicted with their personal moral standards. In this case, the data revealed whether creativity stimulated flexible moral judgments and justifications for both moral and immoral deviations. Study 2 also tested H2, which predicted that people would

approve of rule circumventions to satisfy an alternative moral principle more than rule circumventions to violate appropriate moral rules.

3.2. Study 2

Moral and immoral rules are often unparalleled and difficult to compare. Thus, to retain control, Study 2 used controlled scenarios adapted from an actual business dilemma to directly compare the effects of creativity on people's reactions to moral and immoral rules. Like the actual situation, decision makers could pursue a variety of different solutions, including breaking a law or circumventing it by taking advantage of a loophole.

3.2.1. Design and experimental procedure.

A total of 535 U.S. respondents, 42.9% female, averaging 32.94 years of age, were recruited from Mturk to participate in an online experiment. Participants were randomly assigned to one of four experimental conditions in a 2 × 2 factorial design, in which creativity was primed (or not) and the decision scenario was framed as a choice in which a legal ordinance was either moral or immoral.

Priming creativity. To test the robustness of Study 1's results, Study 2 used a subtle manipulation to implicitly prime creativity. The participants in the creativity condition were asked to view a set of 15 pictures of creatively designed lamps. In contrast, the participants in the control condition viewed 15 pictures of regular lamps. The lamps' colors and other aspects of design were controlled; thus, the most distinguishing feature between the two sets of lamps was the creativity of the design.

The decision task. After experiencing the two primes (creativity versus control), the participants first answered manipulation check questions and a couple of filler questions; next they received one of two versions of a business dilemma. Their task was to determine how to proceed

with a plan to locate a large superstore (85,000 square feet) in a small town in which zoning restrictions limited the footprint of a building to 60,000 square feet. (The original case occurred in Kirkland County, Maryland at a site for a Wal-Mart store. The problem was solved by planning to build two stores side-by-side. This creative solution led to vehement opposition, which, ultimately, led them to abandon their building plan altogether; Paley, 2005.)

Moral versus immoral ordinance. In the moral rule condition, the participants were presented with this decision dilemma. (Wal-Mart's name was never mentioned). The case was described as occurring in a foreign country, where the local government restricted the size of stores to create equal opportunities for smaller retail stores. Thus, the ordinance was portrayed as legitimate and fair. After reading the case, the participants were asked to assume the role of the store manager, whose performance would be carefully evaluated. Thus, they faced a difficult conflict: follow the moral law versus break it to pursue profits. Their decision task was open-ended, inviting any solution that participants wanted to suggest.

The immoral rule condition presented exactly the same scenario and background information. Rather than presenting the town's rule as legitimate and right, however, the ordinance was framed as a barrier created by local officials to possibly ask for bribes. Now, an immoral rule restricted the firm's potential for profits and the participants, acting as store managers, had to determine whether they would follow an immoral ordinance or break it[2] to pursue profits.

After the participants read one of the two dilemmas (moral versus immoral), they answered four manipulation check questions asking them how ethical, moral, appropriate and acceptable it was for the foreign government to restrict the size of retail stores (α=.95).

[2] Breaking moral and immoral ordinance was likely to result in different consequences: paying a fine versus a bribe. The consequences were suggested but not explicitly mentioned in each case.

3.2.2. Dependent variable and other measures

The major dependent variable was whether participants circumvented the ordinance, like Wal-Mart, by proposing to build side-by-side stores. Two research assistants, blind to the hypotheses, were trained to code participants' decisions about circumvention of the ordinance. After resolving any discrepancies through discussions, their two sets of coding agreed with each other in every case.

The participants also rated on a 1-to-7 Likert scale the acceptability, appropriateness, rightness, and ethicality of building two stores side-by-side. Their ratings were highly inter-correlated and were averaged to form an ethics index (α=.90). In the end, participants answered questions about their demographic information and were asked to solve 10 Remote Associates Test (RAT) items.

3.2.3. Results

Following the standard procedures in social psychology, I first conducted manipulation checks and then analyzed the effects of creativity primes on rule circumventions and violations. First, both creativity and moral rule manipulations were effective. As in Study 1, participants reported that the creativity prime (*M*=5.17, *SD*= 1.45) was more helpful in promoting creative thinking than the control prime (*M*= 3.67, *SD*= 1.46), t (1, 533) = 11.89, p<.0001); they also marginally solved more Remote Associates Test (RAT) problems (*M*=5.24, *SD*=2.57) than those in the control prime condition did (*M*=4.84, *SD*=2.83; *t* (1, 533) = 1.72, *p*=.09), suggesting that the creativity prime was generally effective. In addition, the participants rated the control prime (*M*=3.77, *SD*=1.64) as marginally more helpful in enhancing analytical thinking than the creativity prime (*M*=3.53, *SD*=1.72; *t* (1, 533) = 1.64, *p*=.10), suggesting that they did not display biased halo effects when they evaluated the creativity prime.

3.2.3.1. Rule circumvention

When creativity was primed, the respondents were more likely to circumvent the ordinance by proposing to build two stores side-by-side[3]: 35% (93 out of 263) vs. 23%; (63 out of 272); χ^2 =9.63, *p*=.002. Whether the ordinance was framed as moral or immoral did not affect respondents' decision to use the loophole. In both conditions, people who were primed to be creative were more likely to circumvent the ordinance (34% vs. 22%; χ^2=5.15, *p*=.02 for the immoral rules condition and 36% vs. 24%; χ^2=5.05, *p*=.03 for the moral rules condition). Thus, these results supported H1 and H2. Depending on morality of the situation, creativity prompted people to be more moral in one condition and more self-interested in the other.

3.2.3.2. Rule violation, bribery, and other rule-breaking solutions

The respondents rated the decision they faced as a clearly ethics-related decision in both the moral (*t*=8.17, *p*<.001) and immoral rule conditions (*t*=6.81, *p*<.001), at close to equal intensity (*M*=5.95, *SD*=1.61; *M*=5.89, *SD*=1.51; *t*= (1, 533) = .41, *p*=.68). Thus, only two respondents, one in the creativity condition and one in the control condition, proposed that they would violate the zoning ordinance by either paying a fine or facing other legal consequences later. In addition, 13 respondents in the control condition proposed *bribery* (direct or indirect) as a solution; 16 respondents in the creativity condition did the same (5% vs. 6%, χ^2=.44, *p*=.51). Four respondents in the creativity condition suggested other solutions to break the ordinance: two suggested making a donation or gift (non-bribery) to the local community or education in exchange for special treatment and two suggested that they would lobby the government to bend the rule. Although only one similar solution emerged in the control condition, the difference in

[3] Across the four conditions, 19 participants (4%) chose to build up. Neither including them as creative circumventions nor excluding them affected the results. Their solutions were included as creative circumventions in the final analyses.

these frequencies was nonsignificant (1.5% vs. 0.3%; χ^2=1.92, *p*=.17). Overall, these results extended Study 1's findings: activating creativity increased rule circumventions rather than blatantly unethical solutions such as direct rule violations, for both moral and immoral rules.

3.2.3.3. Higher moral decisions

Two respondents in the control condition proposed higher moral solutions. One proposed to air the dirty laundry of the local government in the media and another indicated that s/he would quit the job because of the corruption. Although no respondent in the creativity condition made a similar proposal, the effect was nonsignificant because there were only two cases in the control condition (χ^2=1.97, *p*=.16).

3.2.3.4. Approval of rule circumventions

The respondents' ratings of the appropriateness of the two-store solution suggest that people in the creativity condition (*M*=5.16, *SD*=1.72) rated rule circumventions as marginally more appropriate and moral than people in the control condition did (*M*=4.90, *SD*=1.65, *t* (1, 451) = 1.83, *p*=.07). In addition, the participants also rated the rule circumventions as more appropriate when the immoral ordinance (the bribery-seeking ordinance; *M*=5.71, *SD*=1.48) was circumvented than when the moral ordinance was circumvented (the equal opportunity ordinance; *M*=4.61, *SD*=1.77; *t* (1, 261) = 5.50, *p*<.0001). The effect was the same for the creativity-primed participants regardless of whether they proposed the two-store solution or not in their own decision (*t* (1, 91) = 4.06, *p*<.0001) for people who proposed the two-store solution and *t* (1, 168)= 4.16, *p*<.001 for people who did not). Thus, the results only partially supported H2: after the creativity prime, people marginally approved the rule circumvention more. In particular, they tended to approve the circumvention of immoral rules more than the circumvention of moral rules.

3.2.4. Discussion

Study 2 supported H1 in two markedly different moral contexts. Like Study 1, priming creativity led people to discover highly creative but morally questionable decisions, in this case, circumventing a zoning ordinance by taking advantage of a loophole. Promoting creativity also led to similarly creative, but moral rather than immoral solutions to avoid bribing the corrupt officers. Thus, creativity seems to have two potent effects: it increased immoral rule circumventions as well as more moral behavior to circumvent unethical rules or laws. In both cases, creativity leads to search for a pragmatic, moral middle ground that overcomes the inadequacies of existing moral solutions, i.e., either to follow or violate the zoning law.

People in the control condition were not necessarily short of other creative solutions - but they seemed to use their creative abilities to follow the rules instead of circumventing them. Their solutions, for instance, included creative ideas such as opening online stores, using catalogs and showcases for merchandise delivery, and establishing an alliance with storage and other business partners to save space. Thus, when creativity was not activated, people seemed to have a natural or implicit tendency to search for solutions within the rules of the game instead of trying to circumvent them. In contrast, more people in the creativity condition circumvented the ordinance, regardless of whether the ordinance was moral nor not.

Although Study 2 used tightly controlled scenarios, the moral and immoral ordinances were not entirely balanced as breaking the ordinances might lead to different consequences (e.g., paying a fine versus a bribe). Also, bribery might have much stronger moral connotations than the purpose of moral rules in the other condition. To address these issues, Study 3 used scenarios with more balanced moral versus immoral rules to replicate Study 2's results.

3.3. Study 3

Study 3 continued to use controlled scenarios adapted from Study 2 to directly compare the effects of creativity on people's reactions to moral and immoral rules in an online experiment. As in Study 2, people could pursue a variety of solutions, including breaking the law or circumventing it by taking advantage of a loophole.

3.3.1. Design and Experimental Procedure

A total of 161 U.S. respondents, 40.6% female, averaging 32.81 years of age, were recruited from Mturk to participate in the online experiment. As in Study 2, they were randomly assigned to one of four experimental conditions in a 2 × 2 factorial design, in which creativity was primed (or not) and the decision scenario was framed as a choice in which the rules were either moral or immoral.

The experimental procedure and decision task. The participants experienced Study 1's two primes (creativity versus control) and answered the same set of manipulation check questions and some filler questions. Then they received one of two versions of the business dilemma adapted from Study 2. Again, their task was to determine how to proceed with a plan to locate a large superstore in a small town in a foreign country.

Moral versus immoral rules. The ordinance was portrayed as legitimate and fair in the moral rule condition as it was to create fair competition for all the stores, especially small local businesses. Different from Study 2, the ordinance in the immoral rule condition was described as a barrier created by the local government to create unfair competition against foreign companies. Thus, in the role of the store manager, the participants faced a dilemma: break the ordinance or follow it.

After participants read one of the two dilemmas (moral versus immoral), they all answered the same manipulation check questions about the appropriateness of the foreign government to restrict the size of retail stores (α=.90).

Dependent variable and other measures. Similar to Study 2, the major dependent variable was whether participants took advantage of the loophole to build side-by-side stores[4]. Participants also answered the same set of rating questions about building two stores side-by-side. As before, their ratings were highly inter-correlated and were averaged to form one index (α=.91). In the end, participants answered questions about their demographic information and solved 10 Remote Associates Test (RAT) items.

3.3.2. Results

3.3.2.1. Manipulation check.

Following the same standard procedures, I first conducted manipulation checks and then analyzed the effects of creativity primes on people's rule circumventions versus violations. First, both the creativity and moral rule manipulations were effective. The participants reported that the creativity prime (*M*=5.77, *SD*= 1.21) was more helpful in promoting creative thinking than the control prime (*M*= 4.96, *SD*= 1.31), t (1, 159) = 4.07, p<.01; they also correctly solved more Remote Associates Test (RAT) problems (*M*=7.09, *SD*=2.45) than those in the control prime condition (*M*=5.53, *SD*=2.91; t (1, 159) = 4.77, p<.01). In addition, the respondents clearly rated the store size ordinance as more moral when it was used to promote equal opportunity (*M*=4.42, *SD*=1.20) than as a barrier to promote discrimination (*M*=2.98, *SD*=1.40, t (1, 159) = 7.00, p<.01).

3.3.2.2. Creative rule circumventions

[4] As in Study 2, the solutions to build up were counted as creative circumventions in the final analyses. Including or excluding these solutions did not change the results of the study.

Like Study 2, when creativity was primed, respondents were more likely to circumvent the rule by proposing to build two stores side-by-side[2]: 76% (62 out of 82) vs. 25% (20 out of 79); χ^2 =40.72, p<.001.The difference in these frequencies is substantial. Also, whether the rule was framed as moral or immoral did not affect respondents' decision to use the loophole. In both conditions, people who were primed to be creative were more likely to use the loophole (71% vs. 24%; χ^2=17.25, p<.001 for the moral rules condition and 80% vs. 26%; χ^2=23.33, p<.001 for the immoral rules condition). Thus, these results replicated Study 2's and continued to support H1.

3.3.2.3. Other questionable solutions

Although bribery was not mentioned in the scenario, seven respondents in the control condition proposed *bribery* as a solution; none of the respondents in the creativity condition did so (9% vs. 0%, χ^2=7.60, p=.006). Two respondents in the creativity condition suggested other potentially questionable solutions: one suggested offering the local government profit-sharing and another suggested misrepresenting the store's actual size by not reporting the size of basement and/or storage space. Although no similar solutions emerged in the control condition, the difference in these frequencies was nonsignificant (2% vs. 0%; χ^2=1.95, p=.16). Overall, these results were similar to those for Study 2.

3.3.2.4. Approval of rule circumventions

The participants in the creativity condition (M=5.92, SD=1.36) rated using the two-store solution to circumvent the rule as more appropriate and moral than those in the control condition did (M=4.75, SD=1.63, t (1, 159) = 4.97, p<.001). In addition, the participants also rated the rule circumventions as more appropriate when the rule was framed as immoral (the discrimination ordinance; M=6.30, SD=.99) than moral (the equal opportunity ordinance; M=5.49, SD=1.59; t (1, 80) = 2.81, p=.006). Finally, for the creativity-primed participants who proposed the two-

store solution, they also rated the rule circumventions as marginally more appropriate when the rule was immoral (M=6.36, SD=. 98) than moral (M=5.93, SD=1.05; t (1, 60) = 1.67, p=.10). Thus, the results continued to support H2.

3.3.3. Discussion

Study 3 generally replicated Study 2's results using a slightly different scenario. When the immoral rule was framed as unfair discrimination instead of bribery, the participants demonstrated the same decision pattern in terms of their recommended solutions. Thus, assuredly, Study 3's results continued to support the previous findings.

To further confirm the results from the first three studies, I also conducted a random-effects meta-analysis to test the effect size of creativity prime effects. Across the first three studies, the creativity primes significantly increased the likelihood of rule circumvention (d = 1.34, SE=.52, 95% CI [.34, 2.35], Z=2.61, p = .009). Thus, taken together, these meta-analytic results provide further support to the effects of creativity on rule circumventions.

Studies 2 and 3 also suggest that, regardless of their decisions, people in the creativity condition approved of rule circumvention more when it meant acting against immoral rules than when it meant acting against moral rules. This raises a natural question about the effects of creativity on right-right versus. right-wrong decisions because many right-right moral issues evoke the kinds of conflicting values that people faced in the immoral conditions. Following a similar logic of H2, that when creativity is activated, people endorse moral rule circumvention more than immoral rule circumvention, H3 predicted that, although creativity would change people's perceptions in favor of both right-wrong and right-right moral issues, the positive effect of creativity on right-right moral issues would be stronger than its effects on right-wrong moral

issues. Study 4 tested this prediction with an archival dataset to investigate how workplace creativity would relate to people's perceptions of right-right versus right-wrong moral issues.

3.4. Study 4

Study 4 used a large dataset of 4,833 managers in 20 countries from the World Values Survey (WVS) to test H3: creativity would be more related to approval of right-right than right-wrong moral issues. The WVS data have been widely used by a variety of social science studies, including many economic and organizational studies (e.g., Bertrand & Schoar, 2006; Cullen, Parboteeah, & Hoegal, 2004; Ertug et al, 2013; Guiso, Sapienza, & Zingales, 2006; Parboteeah & Cullen, 2003; Wang & Murnighan, 2014). The World Value Study Group collects WVS data every 5 years in face-to-face interviews and then makes the data available through the Inter-University Consortium for Political and Social Research. Most of the data are collected in 43 countries, representing almost 70% of the world's population.

In addition to all the questions about values and beliefs, the WVS interview asked people from different countries about the nature of their work, including its demand for creativity, as well as other personal and professional information and their general reactions toward a variety of morality-related behaviors. Unlike the need for creativity in other settings, jobs that require creativity are likely to relate to different moral issues (Baucus, et al, 2008). Thus, these data are a rich and valuable source for testing the relationship between work-related creativity and people's ethical perceptions of right-right and right-wrong moral issues.

3.4.1. Methods

Study 4 used individual data from the 2005-06 wave of the WVS; it also used cultural data from Hofstede (2001) and country data from the World Bank, the CIA's World Factbook, and the Freedom House. Like Cullen et al (2004), I chose to analyze only the data of managers and

business professionals to make this research more relevant to organizations. This restriction and incomplete data for some measures and countries led to a final sample of 4,833 managers from 20 countries: Australia, Brazil, Bulgaria, Canada, Chile, China, Finland, Germany, India, Indonesia, Italy, Malaysia, Mexico, Norway, Poland, Romania, South Africa, Sweden, Thailand, and Turkey. The patricipants averaged 43.66 years of age; 44% were women; and 58.4% had some college education or more.

3.4.2. Dependent Variables

Right-wrong moral issues. Like previous research (e.g., Cullen et al., 2004; Wang & Murnighan, 2014), my measure of the approval of right-wrong moral behavior was the average of participants' ratings (from 1: never to 10: always) of how often four behaviors were justified: 1) "claiming government benefits to which you are not entitled;" 2) "avoiding a fare on public transport;" 3) "cheating on taxes if have a chance;" and 4) "accepting a bribe in the course of your duties." The scale was reliable (α =0.79), indicating consistent perceptions across countries (Husted, et al, 1996).

Right-right moral issues. The measure of the approval of right-right moral behavior combined participants' ratings (on the same 10-point scale) of how often six morally debatable behaviors were justified: 1) homosexuality; 2) prostitution; 3) abortion; 4) divorce; 5) euthanasia; and 6) suicide. This scale was also reliable across respondents in different countries (α =0.87).

3.4.3. Independent Variable

Repeated exposure to creativity was measured by the degree of creativity that respondents' work typically required. People self-reported whether their work tasks were mostly routine or mostly creative, from 1=mostly routine to 10=mostly creative.

3.4.4. Control Variables

Other job characteristics. The analyses also included three control variables relating to respondents' job: 1) the cognitive versus manual nature of respondents' jobs (1=mostly manual; 10 = mostly cognitive), 2) how much independence they had at work (1=no independence at all; 10= completely independent), and 3) whether they supervised others at work (1=no, 2=yes).

Demographics and other personal variables. I also controlled for the respondents' demographics and variables potentially related to their moral perceptions (Wang & Murnighan, 2014): age, gender, education, marital status, income, life satisfaction, as well as religious, charitable, environmental memberships.

Country-level variables. Because the data spanned 20 countries, I controlled for each country's: GDP per capita (from the World Bank's online database, log-transformed); public ethics index (from the World Bank's Global Competitiveness Report); Hofstede's (2001) cultural dimensions – individualism, power distance, uncertainty avoidance, and masculinity; press freedom (Brunetti & Weder, 2003); and the Gini coefficient (from the CIA's World Factbook) to control for income and social inequality (Yitzhaki, 1979).

3.4.5. Analyses

Because the dependent variable was measured at the individual level but the independent and control variables were measured at both the individual and country levels, I used Hierarchical Linear Modeling (HLM; Raudenbush & Bryk, 2002) to analyze the relationship among workplace creativity, right-wrong, and right-right moral issues. I also estimated a multiple regression model to evaluate multiple collinearity diagnostics. Like previous research (e.g., Hofstede, 1980), power distance was highly correlated with individualism (r=-0.80, p<.001), the public ethics index (p=-0.69, p=.01), and press freedom restrictions (r=0.58, p<.01). In addition, GDP per capita was highly correlated with individualism (r=.58, p<.01) and the public ethics index (r=.51, p=.02). Thus, I

excluded them from the analyses; including them, however, did not change any of the results. Although the public ethics index was also correlated with individualism (r=0.52, p=.02), uncertainty avoidance (r=.54, p=.014), and masculinity (r=-0.51, p=.022), I included it in the final analyses to conceptually control for country level corruption; notably, excluding it led to no significant changes in the results.

3.4.6. Results

Table 1 presents the descriptive statistics and correlations for Study 3's variables. The raw correlation between workplace creativity and approval of right-right moral issues was positive and significant (r=.27; p<.001); the correlation between workplace creativity and approval of right-wrong moral issues was negative and significant (r=-.06, p<.01), suggesting that workplace creativity increased people's justifications of right-right but decreased their justifications of right-wrong moral issues.

--------- Insert Tables 1- 2 about here ---------

Table 2 presents the HLM analyses. Model 1 shows the relationship between workplace creativity and approval of right-right moral issues after controlling for other variables; Model 2 shows the relationship between creativity and approval of right-wrong moral issues after including all the control variables. As aforementioned, all the variables were standardized to obtain standardized coefficients. The results document a significant, positive relationship between workplace creativity and approval of right-right moral issues (γ=.03, p=.002). In contrast, the negative relationship between workplace creativity and approval of right-wrong behavior became non-significant (γ=-.00, p=.90) after controlling for individual and country-level factors and other job characteristics, e.g., independence and cognitive load. Thus, the analyses support H3: workplace creativity was positively related to the approval of right-right rather than right-wrong moral issues.

As predicted, creativity seems to be related to an increase in people's moral flexibility toward right-right instead of right-wrong issues.

3.4.7. Discussion

As workplace creativity increased, the approval of right-right moral issues also increased; this effect was not apparent for right-wrong moral issues. This suggests that creativity has asymmetric effects on people's moral perceptions of right-right versus right-wrong moral issues.

Study 4 was an initial investigation of the effects of creativity on right-right versus right-wrong moral issues. The results are suggestive rather than conclusive because the contrasting domains of right-wrong versus right-right issues are neither simple nor straightforward, making the comparability of different moral issues a considerable research challenge. Exploring the effects of creativity on these issues, however, opens up a fruitful avenue for new research. The inherent limitations of the archival data in this study also make it difficult to test causal relationships or the underlying mechanisms. In addition, both workplace creativity and ethical perceptions are based on self-reported measures. Because self-reported measures can be biased (Weingart, 1997) or vary cross culture (Heine, et al, 2002), the relationships between workplace creativity and moral judgments may be more complex. Thus, although these findings should be interpreted with caution, these initial results are consistent with the current theoretical logic.

4. General Discussion

This research has shown that creativity, as a pragmatic moral tool, can have substantial but malleable effects on moral judgments and decisions, and that these effects depend on the context of an individual's moral decision. Although creativity and morality may conflict when a creative decision violates acceptable moral rules and norms, the relationship between the two can also be compatible when individuals use creativity to avoid immoral rules or laws. In both situations,

creativity leads to resourceful rule circumventions rather than any blatant moral or rule violations. This result suggests that people use creativity to pragmatically solve moral problems by searching and locating a middle moral ground to balance different moral motives. In addition, although the effects of creativity can be contextual and malleable, people generally approve more of creative and moral behavior instead of similarly creative but morally questionable behavior. Similarly, workplace exposure to creativity appears to be related to people's moral perceptions and justifications of right-right rather than right-wrong moral issues.

4.1. Theoretical and practical implications

The current research has several implications for creativity and moral problem solving. First, it challenges the common, intuitive view that the originality and divergence of creativity (Guilford, 1956) is contrary to conventional morality. Although creativity's negative effects are often overlooked or downplayed (Shalley & Zhou, 2008), a singular focus on creativity's dark moral side seems to be both narrow and misleading. Many immoral decisions, such as outright moral or rule violations, have no novelty and originality; they simply represent some of the most readily available, and unethical choices. The current research suggests that creativity does not necessarily encourages these mundane, unethical activities (Runco, 2009; Wang & Murnighan, 2015). Instead, it seems to selectively motivate original moral alternatives that people would otherwise rarely attempt especially when they are uncreative. For example, the first three studies consistently showed that creativity can increase rule circumventions but not direct rule violations. In addition, Study 4 showed that creativity is related to only justifications of morally debatable issues, not immoral issues. Thus, only some of the moral choices are relevant to creativity. In particular, the moral effects of creativity should be most influential in less explored and less well-defined moral periphery; but it seems unlikely to affect moral issues which are

already set in stone. This finding is particularly important to understand the relationship between creativity and morality.

Second, the current results suggest that creativity can be a double-edged sword, with both positive and negative moral consequences. This is consistent with Keem et al. (2017), who showed that moral disengagement and moral imagination led creative individuals to engage in either ethical or unethical behavior. Instead of focusing on dispositional creativity, the current research suggests that when a creative mindset is activated, people often use it as a tool to search for new moral alternatives to existing moral problems. It appears that, as a complex mindset, creativity unpacks flexible moral perceptions in relatively ambiguous moral situations. Because of its pragmatic orientation, creativity seems to have its greatest effects in the middle of the moral continuum, where moral flexibility is possible. For instance, the results of both Studies 2 and 3 suggest that on the one hand, when morally grey areas exist, creativity can lead people to circumvent moral rules or principles instead of directly violating them to achieve personal gains. On the other hand, creativity can also produce moral flexibility with positive moral consequences because people are also likely to circumvent immoral rules to embrace higher moral principles when rules or social conventions are misguided. Thus, in terms of the moral implications of creativity, the bright or dark side of creativity depends on the specific moral situations. In either case, although creativity can prompt unconventional thinking that transcends traditional moral boundaries, it primarily serves as a pragmatic tool because people often use creativity to balance different moral considerations by both exploring moral innovation and, at least, paying oblique homage to rules and traditions.

Finally, the good news from the current research is that, as a double-edged sword, creativity seems positively related to perceptions and justifications of right-right but not to justifications of

right-wrong moral issues. This suggests that creativity only increases moral flexibility for morally debatable issues but not for positions that are clearly immoral. Thus, if correctly guided, creativity may have more positive than negative effects on moral judgments and decisions because people tend to avoid choices that are clearly wrong and immoral. This also suggests that organizations may encourage creativity for emerging moral issues where traditional morality is unclear, outdated, or even misguided. In particular, to motivate more moral and prosocial behavior in untraditional moral areas, organizations may consider better aligning employees' creativity with concerns about others. Grant and Berry (2011), for example, found that people's prosocial actions often depend on creativity to go beyond egoistic orthodoxy. Brierly, Kolodinsky, and Charette (2009) also found that creative individuals tend to be idealists with a genuine concern about others instead of their self-interest. Thus, a particularly useful idea is to create a truly caring working environment that encourages employees to engage in the creative pursuit of prosocial and social responsibility goals because this paradigm may provide organizations with the extra moral advantages that come from capitalizing on the creativity of their workforce.

4.2. Limitations and future directions

The current research used multiple, complementary methods to investigate the effects of creativity on people's moral decisions and perceptions. Any single method is inherently limited. For instance, Study 1 is limited by its experimental context; Studies 2 and 3 used a real ethical situation but have clear limitations because they are primarily based on a scenario study; Study 4 is limited by correlational data and subjective, self-reported measures. Although this research used a triangulation of multiple methods to collectively compensate for each method's inherent problems (Hussey, & Hussey, 1997), several limitations provide avenues for future research.

First, people often focus on moral constraints in the study of moral decisions. At the post-conventional level, however, moral reasoning is no longer restricted by moral constraints (Kohlberg, 1971). This suggests that creativity might activate higher level moral innovation (Runco, 2009). For example, moral imagination theory (e.g., Werhane, 1998) suggests that imagination can help people avoid a narrow view of their moral situations and allow them to act more morally in right-wrong moral decisions. Although people may sometimes act less morally when they engage in moral imagination (as suggested by the current data; Ciulla, 1998), how moral development and creativity interact to affect moral decision-making clearly deserves future research attention.

Second, as one of the first investigations of the effects of creativity on right-right versus right-wrong moral issues, Study 4 provides a new direction to better understand the moral implications of creativity. Future research is also needed to help guide creativity toward moral effects. One potential starting point may be to rethink the definition of creativity in research and practice. In addition to its novelty, previous research defines creativity as *appropriate* ideas that actually work (e.g., Amabile, 1996; George, 2007). Conceptually speaking, morality could be considered one of the appropriateness criteria (Wang & Murnighan, 2015). Thus, future research might consider how to attain a dual goal of addressing creativity's moral appropriateness (in terms of its definition and people's perceptions) without necessarily discouraging or inhibiting creativity (Runco, 2010).

Finally, the current research primarily investigates creativity as a general mindset; however, there are different types of creativity (Kirton, 1976; Oldham & Cummings, 1996). For example, creativity can be characterized as incremental or radical. Similarly, individuals may have different creative styles (e.g., innovative versus adaptive style, Kirton, 1976; 1994). It is

unknown from the current research whether different types of creativity or creative styles may have different moral implications. Additionally, because creativity and morality are complex and may vary in different contexts, investigating a number of different boundary conditions to better understand the relationship between creativity and morality might be helpful. For example, Study 4 compared people's moral perceptions instead of their workplace decisions in right-right versus right-wrong dilemmas. The complexity of these moral issues opens up a variety of new research questions. For instance, do the effects of creativity vary in interpersonal and organizational contexts? Do right-right and right-wrong moral issues co-vary with creativity across contexts? How does creativity affect the behavior and perceptions of oneself versus those of others? I hope that this paper will stimulate future research on these and other related and important questions.

5. Conclusion

In conclusion, this research investigates the dual relationship between creativity and morality. People often use creativity to cope with practical moral problems. By activating their creativity, people are more likely to explore previously untapped moral middle grounds to pragmatically reconcile moral interests. The current results suggest that creative moral deviance may be either moral or immoral, depending on whether society's existing rules are just and fair and on people's moral intents. In addition, creativity seems closely related to the justifications of right-right but not of right-wrong moral issues. Thus, future research might further investigate how to positively use creativity to solve moral dilemmas in both organizations and society.

REFERENCES

Adams, J. S. (1963). Toward an understanding of inequity. *Journal of Abnormal and Social Psychology*, 67, 422-436.

Akerlof, G. A. & Shiller, R. J. (2009). *Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters For Global Capitalism*. Princeton: Princeton University Press.

Amabile, T. M. (1983). *The Social Psychology of Creativity*. New York: Springer-Verlag.

Amabile, T. M. (1996). *Creativity in context: Update to the social psychology of creativity*. Boulder, CO: Westview Press.

Ambaile, T. M., Barsade, S. G., Mueller, J. S., & Staw, B. M. 2005. Affect and creativity in work. *Administrative Science Quarterly*, 50(3), 367-403.

Aquino, K., & Reed. A. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology*, 83(6), 1423-1440.

Ashford, B. E. & Anand, V. (2003). The normalization of corruption in organizations. *Research in Organizational Behavior*, 25, 1-52.

Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, 3, 193–209.

Barron, F. (1969). *Creative person and creative process*. NY: Holt, Rinehart, & Winston.

Baucus, M. S., Norton, W. I., Baucus, D. A., & Human, S. E. (2008). Fostering creativity and innovation without encouraging unethical behavior. *Journal of Business Ethics*, 81, 97-115.

Beauchamp, T. L., and Bowie, N. E. (2004). *Ethical theory and business*. (7th Ed.,) Upper Saddle River, NJ: Prentice-Hall.

Bertrand, M., & Schoar, A. (2006). The role of family in family firms. *Journal of Economic Perspectives*, 20(2), 73-96.

Bierly, P. E., Kolodinsky, R. W., Charette, B. J. (2009). Understanding the complex relationship between creativity and ethical ideologies. *Journal of Business Ethics*, 86, 101-112.

Bierman, K.L., Smoot, D. L., Aumiller, K. (1993). Characteristics of aggressive-rejected, aggressive (nonrejected), and rejected (nonaggressive) boys. *Child Development*, 64, 139-151.

Brower, R., & Stahl, J. M. (2011). Crime and creativity. In M. A. Runco & S. R. Pritzker (Eds.), Encyclopedia of creativity Vol. 1 (pp. 318–322). San Diego, CA: Academic Press.

Brendl, C. M., Higgins, E. T., & Lemm, K. M. (1995). Sensitivity to varying gains and losses: The role of self-discrepancies and event framing. *Journal of Personality and Social Psychology*, 69, 1028–1051.

Brown, B. S., Weible, R. J., & Olmosk, K. E. (2010). Business school deans on student academic dishonesty: A survey. *College Student Journal*, 44, 299-309.

Brunetti, A., & Weder, B. (2003). A free press is bad news for corruption. *Journal of Public Economics*, 87, 1801-1824.

Campbell, D. (1960). Blind Variation and Selective Retention in Creative Thought as in Other Knowledge Processes. *Psychological Review*, 67, 380-400.

Ciulla, J. B. (1998). Imagination, fantasy, wishful thinking and truth. *Business Ethics Quarterly*, Special issue, (1), 99-107.

Cropley, D. H., Kaufman, J. C., & Cropley, A. J. (2008). Malevolent creativity: A functional model of creativity in terrorism and crime. *Creativity Research Journal*, 20(2), 105-115.

Cropley, A. J. (2010). The dark side of creativity: what is it? In D. H. Cropley, A. J. Cropley, J. C. Kaufman., & M. A. Runco (Ed.) *The dark side of creativity*. pp. 1-14. NY: Cambridge University Press.

Cropley A., & Cropley, D. (2011). Creativity and lawbreaking. *Creativity Research Journal*, 23(4), 313-320.

Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York: HarperPerennial.

Cullen, J. B., Parboteeah, K. P. & Hoegl, M. (2004). Cross-national differences in managers' willingness to justify ethically suspect behaviors: A test of institutional anomie theory. *Academy of Management Journal*, 47, 411-421.

Dewey, J. (1981). Experience and Nature. In J. A. Boydston (Ed.) *The collected works of John Dewey. The later works (1925-1953)*. Carbondale: Southern Illinois University Press.

Dewey, J. (1987). Art as experience. In J. A. Boydston (Ed.) *The collected works of John Dewey. The later works* (1925-1953). Carbondale: Southern Illinois University Press.

Dijksterhuis, A., & Bargh, J. A. (2001). The perception-behavior expressway: Automatic effects of social perception on social behavior. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 33, pp. 1–40). San Diego: Academic Press.

Eisenman, R. (1992). Creativity in prisoners: Conduct disorders and psychotics. *Creativity Research Journal*, 5, 175-181.

Eisenman, R. (1999). Creative prisoners: Do they exist?. *Creativity Research Journal*, 12(3), 205-210.

Ertug, G., Cuypers, I R. P., Noorderhaven, N. G., & Bensaou, B. M. (2013). Trust between international joint venture partners: Effects of home countries. *Journal of International Business Studies*, 44, 263-282.

Etzioni, A. (1988). *The moral dimension: Toward a new economics*. NY: Free Press.

Fesmire, S. (2003). *John Dewey and moral imagination: Pragmatism in ethics*. Bloomington: Indiana University Press.

George, J. M. (2007). Creativity in Organizations. *Academy of Management Annals*, 1, 439-477.

Gino, F., & Ariely, D. (2012). The dark side of creativity: Original thinkers can be more dishonest. *Journal of Personality and Social Psych*ology, 102, 445-459.

Grant, A. M., & Berry, J. W. (2011). The necessity of others is the mother of invention: Intrinsic and prosocial motivations, perspective taking, and creativity. *Academy of Management Journal*, 54(1), 73-96.

Guilford, J. P. (1956). The structure of Intellect. *Psychological Bulletin*, 33, 267-293.

Guiso, L., Sapienza, P., & Zingales, L. (2006). Does culture affect economic outcomes? *Journal of Economic Perspectives*, 20(2), 23-48.

Heine, S., Lehman, D., Peng, K., & Greenholtz, J. (2002). What's wrong with cross-cultural comparisons of subjective likert scales?: The reference-group effect. *Journal of Personality and Social Psychology*, 82, 903-918.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd Ed). Thousand Oaks, CA: Sage.

Hofstede, G. (1980). *Culture's consequences: International differences in work-Related values*. Beverly Hill, CA: Sage.

Hussey, J., & Hussey, R., (1997). *Business research: A practical guide for undergraduate and postgraduate students*. Macmillan Press, London.

Husted, B., Dozier, J. B., McMahon, J. T., & Katan, M. W. (1996). The impact of cross-national carriers of business ethics on attitudes about questionable practices and form of moral reasoning. *Journal of International Business Studies*, 27, 391-411.

Jones, D. L. (2011). Academic dishonesty: Are more students cheating?. *Business Communication Quarterly*, *74*(2), 141-150.

Kidder, R. M. (2009). *How good people make tough choices: Resolving the dilemmas of ethical living*. New York: Harper.

Kirton, M. J. (1976). Adaptors and innovators: A description and measure. *Journal of Applied Psychology*, 61, 622-629.

Kirton, M. J. (1994). Adaptors and innovators: Styles of creativity and problem solving. New York, NY: Routledge.

Kneller, G. E. (1965). *The art and science of creativity*. New York: Holt, Rinehart & Winston.

Koestler, A. (1964). *The act of creation*. London: Hutshinson & Co.

Koestler, A. (1981). The three domains of creativity. In Dutton, D. & Krausz, M. (Eds.)*The concept of creativity in science and art.* pp. 1-17. Dordrecht: Martinus Nijhoff Publishers.

Kohlberg, L. (1971). Stages of moral development. In C. M. Beck, B. S. Crittenden, & E. V. Sullivan (Eds.), *Moral education*. Toronto: University of Toronto Press.

Maslow, A.H. (1967). The creative attitude. In R.L. Mooney & T.A. Razik (Eds.), Explorations in creativity (pp. 43-54). New York: Harper and Row.

Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of marketing research*, 45(6), 633-644.

McCabe, D. L., Treviño, L. K., & Butterfield, K. D. (2001). Cheating in academic institutions: A decade of research. Ethics & Behavior, 11(3), 219-232.

Mednick, S. A. (1962).The associate basis of the creative process. *Psychological Review*, 69, 220-262.

Miller, D. T. (1999). The norm of self-interest. *American Psychologist*, 54, 1-8.

Mumford, M. D.,Waples, E. P., Antes, A. L., Brown, R. P., Connelly, S., Murphy, S. T., & Devenport, L. D. (2010). Creativity and Ethics: The Relationship of Creative and Ethical Problem-Solving. *Creativity Research Journal*, 22(1), 74-89.

Murnighan, J. K., Cantelon, D. A., & Elyashiv, T. (2001). Bounded personal ethics and the tap dance of real estate agency. In J. Wagner, J. Bartunek & K. Elsbach (Eds.), *Advances in qualitative organizational research*, 3: 1– 40. New York: Elsevier/JAI.

Murnighan, J. K., Oesch, J. M., & Pillutla, M. (2001). Player types and self-impression management in dictatorship games: Two experiments. *Games and Economic Behavior*, 37(2), 388-414.

Murphy, S. T., & Zajonc, R. B. (1993). Affect, cognition, and awareness: Affective priming with optimal and suboptimal stimulus exposures. *Journal of Personality and Social Psychology*, 64, 723–739.

Newell, A., Shaw, J. C., & Simon, H. A. (1962). The processes of creative thinking. In H. E. Gruber & M. Wertheimer (Eds.), *Contemporary approaches to creative thinking*. NY: Atherton Press.

Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, 39, 607– 634.

Paley, A. R. (2005). Wal-Mart Drops Plan for Side-by-Side Calvert Stores. *The Washington post*, May 17, B01.

Parboteeah, K. P., & Cullen, J. B. (2003). Social institutions and work centrality: Explorations beyond national culture. *Organization Science*, 14(2), 137-148.

Raudenbush, S.W., & Bryk, A. S. (2002). *Hierarchical liner models: Applications and data analysis methods* (2nd Ed). Newbury Park, CA: Sage.

Rest, J. R. (1986). *Moral development: Advances in research and theory*. NY: Praeger.

Rogers, C.R. (1971). Toward a theory of creativity. In R. Holsinger, C. Jordan, & L. Levenson (Ed.), *The creative encounter* (pp. 2-12). Glenview, IL: Scott Foresman & Company.

Roney, C. J. R., Higgins, E. T., & Shah, J. (1995). Goals and framing: How outcome focus influences motivation and emotion. *Personality and Social Psychology Bulletin*, 21, 1151–1160.

Runco, M. A. (2010). Creativity has no dark side. In D. H. Corpley, A. J. Cropley, J. C. Kaufman., & M. A. Runco (Ed.) *The Dark side of creativity*. (pp. 15-32). NY: Cambridge University Press.

Runco M. A., (2009). The continuous nature of moral creativity. In D. Ambrose, & T. Cross (Ed). *Morality, ethics, and gifted minds*. (pp.105-115). NY: Springer.

Runco, M. A. (2004a). Creativity. *Annual Review of Psychology*, 55, 657-687.

Runco, M. A. (2004b). Everyone has creative potential. In R. J. Sternberg, E. L. Grigorenko, & J. L. Singer (Eds.), *Creativity: From potential to realization* (pp. 21-30). Washington, DC, US: American Psychological Association.

Runco, M. A. (2007). *Creativity theories and themes: Research, development, and practice*. Burlington, MA: Elsevier.

Sandel, M. (2009). *Justice: What's the right thing to do*? NY: Farrar, Straus, & Giroux.

Schuldberg, D. (1997). Schizotypal and hypomanic traits, creativity, and psychological health. In Runco, M.A. & Richards (Eds), pp. 157-17. *Eminent creativity, Everyday creativity and health*. Norwood, NJ: Ablex.

Schweitzer, M. E., & Hsee, C. K. (2002). Stretching the truth: Elastic justification and motivated communication of uncertain information. *Journal of Risk and Uncertainty,* 25(2), 185-201.

Schweitzer, M. E., Ordoñez, L., & Douma, B. (2004). Goal setting as a motivator of unethical behavior. *Academy of Management Journal*, 47(3), 422-432.

Keem, S., Shalley, C. E., Kim, E., & Jeong, I. (2017). Are Creative Individuals Bad Apples? A Dual Pathway Model of Unethical Behavior. *Journal of Applied Psychology*.

Shalley, C. E. & Zhou, J. (2008). Organizational Creativity Research: A historical overview. In Zhou, J. & Shalley, C. E. (Ed.) *Handbook of organizational creativity*. New York: Lawrence Erlbaum. Simonton, D. (1999). *Origins of genius: A psychology of science*. Cambridge: Cambridge University.

Stein, M.I. (1974). *Stimulating creativity: Vol. J. Individual procedures*. NY: Academic Press.

Torrance, E.P. (1967). Nurture of creative talents. In R.L. Mooney & T.A. Razik (Eds.), *Explorations in creativity* (pp. 185-193). New York: Harper and Row.

Torrance, E.P., Clements, C.B., & Goff, K. (1989). Mind-body learning among the elderly: Arts, fitness, incubation. The *Educational Forum*, 54(1), 123-136.

Torrance, E.P., & Torrance, J.P. (1973). *Is creativity teachable*? Bloomington, IA: Phi Delta Kappa Educational Foundation.

Turiel, E. (1983). *The Development of Social Knowledge: Morality and Convention*. Cambridge University Press: Cambridge.

Vincent, L. C., & Kouchaki, M. (2016). Creative, rare, entitled, and dishonest: How commonality of creativity in one's group decreases an individual's entitlement and dishonesty. *Academy of Management Journal*, 59, 1451-1437.

Vohs, K. D., Mead, N. L., & Goode, M. R. (2006). The psychological consequences of money. *Science*, 314(5802), 1154-1156.

Wang, L. (2011). *The Dark Side of Creativity*. Doctoral Dissertation. Northwestern University.

Wang, L., & Murnighan, J. K. (2014). Money, emotions, and ethics across individuals and countries. *Journal of Business Ethics*, 125(1), 163-176.

Wang, L. & Murnighan, J. K. (2015). Ethics and creativity. In Shalley, C. E., Hitt, M. A., & Zhou, J. (Ed). (pp.245-261). *Oxford handbook on creativity, innovation, and entrepreneurship.* New York: Oxford University Press.

Wang, L., & Murnighan, J. K. (2017). The dynamics of punishment and trust. *Journal of Applied Psychology*, 102(10), 1385-1402.

Wang, L., Zhong, C. B., & Murnighan, J. K. (2014). The social and ethical consequences of a calculative mindset. *Organizational Behavior and Human Decision Processes*, 125(1), 39-49.

Weingart, L. R. (1997). How did they do that? The ways and means of studying group process. *Research in Organizational Behavior*, 19, 189–239.

Werhane, P. H. (1998). Moral imagination and the search for ethical decision-making in management. *Business Ethics Quarterly*, Special issue (1), 75-98.

Wolpert, S. (2002). *Gandhi's passion*. New York: Oxford University Press.

Yitzhaki, S. (1979). Relative deprivation and the Gini coefficient. *Quarterly Journal of Economics*, 93(2), 321-324.

Table 1

Correlations and Summary Statistics (Study 4)

		Mean	**S.D.**	1	2	3	4	5	6	7	8	9	10
	Individual Variables	(Level 1)											
1	Right-wrong moral issues	2.18	1.57	-									
2	Right-right moral issues	4.47	2.38	.19**	-								
3	Workplace creativity	5.69	3.03	-.06**	.27**	-							
4	Age	43.98	13.96	-.17**	.04**	.10**	-						
5	Gender	1.44	0.50	-.03*	.07**	.01	-.10**	-					
6	Education	7.43	1.88	-.10**	.16**	.17**	-.13**	.07**	-				
7	Marital Status	1.72	0.45	-.04**	-.04**	-.01	.20**	-.10**	-.04**	-			
8	Income	6.20	2.41	-.03	.13**	.17**	-.03	-.00	.25**	.19**	-		
9	Life satisfaction	7.59	1.80	-.09**	.04*	.10**	.03*	.04*	.04**	.10**	.21**		
10	Religious Org. Member	0.70	0.81	.01	-.23**	-.08**	.04**	.04**	.01	.04**	.01	.07**	-
11	Charitable Org. Member	0.47	0.74	-.01	-.01	-.02	.06**	.04**	.10**	.03*	.01	.03*	.28**
12	Environment Org. Member	0.28	0.59	.03*	-.13**	-.11**	-.03*	-.06**	.05**	.04**	-.05**	-.03*	.23**

13	Cognitive Nature of Work	6.56	3.07	-.08**	.17**	.38**	.07**	.04**	.24**	-.01	.20**	.07**	-.07**
14	Work Independence	7.49	2.36	-.03*	.16**	.27**	.13**	-.01	-.02	.01	.13**	.11**	-.05**
15	Supervising others	1.37	0.48	.04**	-.02	-.03*	-.12**	.13**	.00	.08**	.13**	.05**	-.01
	Country Variables	(Level 2)											
16	Public Ethics Index	49.40	21.79	-.12**	.45**	.23**	.24**	.07**	.06**	.05**	.09**	.15**	.15**
17	Individualism	47.85	23.60	-.16**	.44**	.26**	.25**	.08**	.07**	.05**	.11**	.10**	.10**
18	Uncertainty Avoidance	62.05	20.86	-0.00	-.06**	.07**	-.09**	.03*	-.02	-.08**	-.03*	-.01	-.01
19	Masculinity	47.00	19.10	0.02	-.27**	-.16**	-.03*	-.01	-.10**	-.00	-.09**	-.09**	-.09**
20	Press Freedom	15.95	19.45	0.15**	-.37**	-.24**	-.20**	-.08**	-.08**	-.01	-.10**	-.08**	-.08**
21	Social inequality	40.58	12.28	0.17**	-.33**	-.14**	-.13**	-.06**	-.15**	-.06**	-.12**	-.00	-.00

Note: N=4,883 at level 1; N=20 at level 2

*p<.05; **p<.01

Table 1 (Continued)

Correlations and Summary Statistics (Study 4)

		11	12	13	14	15	16	17	18	19	20	21
11	Charitable Org. Member	-										
12	Environment Org. Member	.40**	-									
13	Cognitive Nature of Work	-.01	-.07**	-								
14	Work Independence	-.01	-.09**	.13**	-							
15	Supervising others	.03*	.01	.02	.09**	-						
	Country Level Variables											
16	Public Ethics Index	.04**	-.13**	.12**	.15**	.03*	-					
17	Individualism	.08**	-.11**	.18**	.22**	.04**	.52*	-				
18	Uncertainty Avoidance	-.15**	-.15**	.08**	-.01	-.04**	-.54*	-.18	-			
19	Masculinity	.01	.11**	.02	-.03*	.04**	-.51*	-.02	.13	-		
20	Press Freedom	-.02	.13**	-.11**	-.10**	-.03*	-.29	.47*	-.21	.47*	-	
21	Social inequality	-.04**	.09**	-.09**	-.07**	.04**	-.16	-.33	.05	.31	.32	-

Note: **N=**4,883 at level 1; N=20 at level 2

*p<.05; **p<.01

Table 2

Hierarchical Linear Models for Approval of Right-Right and Right-Wrong Moral Issues (Study 4)

Variable	**Model 1 (DV: Right-right issues)**		**Model 2 (DV: Right-wrong issues)**	
Level 1	**Coefficient**	**s.e.**	**Coefficient**	**s.e.**
Intercept	4.19***	0.16	2.28***	0.12
Age	-0.01***	0.00	-0.02***	0.00
Gender	0.05	0.05	-0.11*	0.04
Education Level	0.08***	0.02	-0.06***	0.01
Marital Status	-0.19**	0.06	-0.00	0.03
Income	0.05***	0.01	0.01	0.00
Life satisfaction	-0.05***	0.02	-0.05***	0.01
Religious Org. Membership	-0.56***	0.04	-0.01	0.03
Charitable Org. Membership	0.05	0.01	0.00	0.03
Environ. Org. Membership	0.12*	0.05	0.05	0.04
Cognitive Nature of Work	0.03**	0.01	-0.01	0.00
Supervising others	0.09	0.06	-0.13**	0.05
Work Independence	-0.01	0.01	-0.00	0.00
Workplace Creativity	0.03**	0.01	-0.00	0.01
Level 2				
Press freedom	0.03	0.01	0.00	0.01
Income and Social Inequality	0.00	0.02	0.03†	0.01
Country's public ethics	0.02	0.01	-0.01	0.01
Individualism	0.04***	0.01	-0.00	0.01

Uncertainty Avoidance	0.03	0.01	-0.01	0.01
Masculinity	-0.04*	0.01	-0.01	0.01
Within Country Residual variance	3.26		2.10	
ΔR^2 within country	0.55		0.03	
ΔR^2 between country	0.31		0.19	

Note: **N=**4,883 at level 1; N=20 at level 2

†p<.10; *p<.05; **p<.01; ***p<.001