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How Can a Deontological Decision Lead to Moral Behavior? The Moderating Role of Moral Identity

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Abstract Deontology and utilitarianism are two competing principles that guide our moral judgment. Recently, deontology is thought to be intuitive and is based on an error-prone and biased approach, whereas utilitarianism is relatively reflective and a suitable framework for making decision. In this research, the authors explored the relationship among moral identity, moral decision, and moral behavior to see how a preference for the deontological solution can lead to moral behavior. In study 1, a Web-based survey demonstrated that when making decisions, individuals who viewed themselves as moral people preferred deontological ideals to the utilitarian framework. In study 2, the authors investigated the effect of moral identity and moral decision on moral behavior in an experimental study. The results showed that when deontology was coupled with the motivational power of moral identity, individuals were most likely to behave morally.

Keywords Moral decision · Ethical predispositions · Deontology · Utilitarianism · Moral identity · Moral behavior

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Introduction

Deontology and consequentialism are frequently discussed in tandem as they are usually thought as two opposing theories in normative ethics. Consequentialism focuses on the utility of an action, while deontology emphasizes the obligation of an individual to adhere to universal moral rules, principle to determine moral behavior (Brady and Wheeler 1996; Kant 1996). Some theorists argue that consequentialism is a more appropriate framework when making moral decisions, since the deontology is usually moral shortcut and commits moral errors (see reviews in Baron and Ritov 2009; Sunstein 2005). Recently, however, Bartels and Pizarro (2011) found that those individuals who are least prone to moral errors also possess a set of psychological characteristics, such as have higher scores on measure of antisocial personality traits, which many would consider prototypically immoral. Though Bartels and Pizarro's research has provided evidence to justification for deontological thinking in moral decision, we argue that the existing investigations have disproportionately relied on recording participants' responses to "sacrificial" dilemmas. In these types of dilemmas, participants are asking whether it is acceptable to kill a person to save others (e.g., Greene et al. 2001; Greene 2007). The protected value "not to harm innocent person's life" in these dilemmas is, we argue that, rare confronted in daily life, especial in business world. The basic conflict of economics is that people act in ways to maximize their self-interest pit against the respected rules and laws. From this sense, existing research contributes relatively limited to our understanding of deontological thinking in business dilemmas. In the present study, we show that in "everyday morality," the deontological thinking is not necessarily an error-prone and biased approach in morality. For individuals with strong

moral identity, deontological thinking is more likely to lead to moral behavior in daily life. A great deal of research has already explored the effects of moral judgment and moral identity on moral behavior separately. However, few studies investigate how moral identity affects moral judgment and how moral identity and moral judgment interact together to shape moral behavior. In this study, we intend to establish the relationship between moral identity and moral judgment and then investigate how moral identity and moral decision act dependently to shape moral behavior.

Social Cognitive Perspective on Moral Identity

Increasing researchers have recognized the limitations of the cognitive development theory (e.g., Haidt 2001; Krebs and Denton 2005), and several of them have turned to the identity theory (e.g., Aquino and Reed 2002; Blasi 1980; Shao et al. 2008). They suggest that moral behavior is the result of both moral judgment and moral identity, and moral identity is used to bridge the gap between moral judgment and moral behavior (e.g., Blasi 1984; Damon and Hart 1992; Hardy and Carlo 2005; Hardy 2006; Reynolds and Ceranic 2007).

Moral identity reflects the significance and salience of moral values in one's identity (Blasi 1984). For some individuals, moral considerations are abundant in everyday living because morality is rooted at the core of their being, whereas for other individuals, moral standards and values are not that particularly salient in their daily activities and self-concept (Aquino and Reed 2002; Blasi 1984). Scholars conceptualize moral identity from two different perspectives: one is the character perspective, and the other is the social cognitive perspective (Shao et al. 2008). The character perspective appears to focus on a relatively narrow set of moral behaviors that are undertaken after thoughtful consideration (Hardy and Carlo 2005). Thus, it may fail to account for the possibility that most of what constitutes the practice of "everyday morality" may be fast, automatic, unconscious, and driven by moral heuristics rather than calculative reasoning (Lapsley and Narvaez 2004; Narvaez et al. 2006; Shao et al. 2008). The social cognitive perspective defines moral identity as the cognitive schemas, moral values, goals, traits, or behavior scripts a person holds about his or her moral character (Aquino and Reed 2002; Aquino et al. 2009; Lapsley and Narvaez 2004). This approach adopts knowledge accessibility as the mechanism to explain its role in moral functioning. If a given schema has high accessibility, it should exert a strong influence on behavior (Aquino and Reed 2002; Higgins and Brendl 1995). The motivating force of moral identity comes from people's desire to maintain self-consistency (Aquino et al. 2009; Blasi 1980). A strong moral identity compels the individual to act morally (Damon and Hart 1992). Building from this social cognitive perspective, Aquino and Reed (2002) conceptualized moral identity as a self-schema organized around a set of moral traits. Aquino and Reed (2002) also demonstrated that moral identity has both public and private aspects. The private aspect of moral identity is internalization and the public one is symbolization. Internalization taps the degree to which moral traits are central to the self-concept, while symbolization taps the degree to which the traits are reflected in the respondent's actions in the world (Aquino and Reed 2002). Theories and research on moral identity have established the relationship between moral identity and moral behaviors, including self-reported volunteering, and the willingness to minimize harm toward an out-group, and cheating behavior (e.g., Aquino and Reed 2002; Gino et al. 2011; Reed and Aquino 2003; Reed et al. 2007; Xu and Ma 2014).

Moral Judgment and Moral Identity

Traditional moral psychologists such as Piaget and Kohlberg underline the importance of moral development, especially the principal role of moral reasoning (Kohlberg 1969; Piaget 1965). Much of the research from this approach has measured moral judgment as stages of moral development (e.g., Kohlberg 1984; Rest 1986). Rest's (1986) influential descriptive four-component model of ethical decision making argued that when making ethical decision and acting morally, a moral agent must (a) have the moral awareness to recognize the moral issue, (b) make a moral judgment, (c) resolve to place moral concerns ahead of other concerns (establish moral intent), and (d) act on the moral concerns. These four factors are important in understanding many ethical decisions, and Rest did provide a persuasive framework for researchers who are interested in moral decisions and moral behaviors. Yet this model is mainly built on two presumptions: (1) awareness is needed for a moral decision, and (2) cognitive moral development is the critical element in moral action (Bazerman and Tenbrunsel 2011). Each of these assumptions, which are implicit in traditional approaches to ethics and many ethical training programs, ignores evidence of other ways (e.g., Bazerman and Tenbrunsel 2011; Haidt 2001).

Other than measuring moral judgment as stages of moral development, perhaps the most influential alternative for conceptualizing and measuring moral judgment is *ethical predisposition* (Brady and Wheeler 1996; Reynolds and Ceranic 2007). Ethical predisposition or moral predisposition refers to the moral frameworks individuals rely on when facing moral decisions (Brady and Wheeler 1996). Research in this area has focused on two of the most

foundational moral frameworks in terms of consequentialism and formalism, as well as in the related constructs of utilitarianism and deontology (Bartels and Pizarro 2011; Brady and Wheeler 1996; Schminke and Wells 1999). In philosophy, consequentialism is usually referred to as utilitarianism, which focuses attention on the ends of an act and contends that the moral act is that which maximizes the good or benefit (Bentham and Mill 1973). In contrast, formalism represents a deontological or an obligation-based approach which emphasizes the importance of patterns, rules of behavior, and other formal standards to determine moral behavior (Brady and Wheeler 1996; Kant 1785/1994). Previous research has demonstrated that a manager's preferences for consequentialism and formalism can influence his or her responses to the characteristics of a moral issue (Reynolds 2006). Employees of a Mid-western financial firm preferred formalist forms of ethical reasoning to utilitarian reasoning (Brady and Wheeler 1996). Ethical formalists were more sensitive to procedural justice issues, and ethical utilitarianism adherents were more sensitive to distributive justice issues (Schminke et al. 1997).

A moral person would be one for whom moral constructs are chronically accessible, readily primed, and easily activated for social information-processing (Aquino et al. 2009; Narvaez et al. 2006; Shao et al. 2008). Moral identity represents a relatively well-defined, clear, easily accessible schemas or ethical predisposition that can be used quick, automatically in making decisions. In Aquino and Reed's (2002) conceptualization, moral identity was organized around a set of moral traits, such as fairness, care, honesty, or kindness. These traits have the essential characteristics of deontological in nature, or at least, appears to be deontological. On the other hand, the well-defined features of moral identity are less useful in computing the utilitarian consequences, which have to rely on a sophisticated calculation of the gain and lost to reach the rule: "To seek the greatest good for the greatest number." We propose that for individuals who have strong moral identity, so that moral schemas, such as obligation and rules of behavior, which are deontology in nature, have chronic accessibility, they would be more likely to consider the moral dimensions of a particular situation and put moral concerns over other concerns. Rather than doing the cost-benefit calculation and take an outcome-based approach, individuals with strong moral identity are more likely to refer to deontology and take a rule-based approach when facing moral decisions. In other words, we hypothesize the following:

Hypothesis 1 People with strong moral identity have a preference for deontology when making moral decisions.

As Brady and Wheeler (1996) found, utilitarianism and deontology are not alternates but, rather, independent sub-dimensions. We emphasize that individuals with strong moral identity possibly also do moral reasoning from a utilitarian approach, but they are concerned more about the rule or pattern of behavior itself (Reynolds 2006). In contrast, individuals with faint moral identity may fail to recognize the moral ingredients of a particular situation and regard it as, for example, a financial decision and focus on the outcome. This happens more often in the real world, where people are required to make a decision from multiple and even contradictory perspectives. We suggest that individuals whose moral schemas are salient in their life experiences and have chronic accessibility are more likely to reason from a rule-based perspective and the deontological framework.

An Integrated Approach to Moral Behavior

How would moral identity and moral judgment act together to shape moral behavior? According to a "dual-process" theory (Kahneman 2011; Sloman 1996), though both automatic responses and more cognitive responses play roles in moral judgment, utilitarian moral judgments are driven by controlled cognitive processes, while deontological judgments are driven by automatic emotional responses (Greene 2007; Greene et al. 2001, 2004, 2008; Haidt 2007). Processing speed, which is usually represented by reaction time, is a frequently used psychological feature that distinguishes deontological thinking (non-utilitarian thinking) from utilitarian thinking (Greene and Paxton 2009; Rand et al. 2012). Deontological thinking is relatively automatically processed and fast, whereas a utilitarian response is a controlled process and requires additional time. Researchers seem to agree that utilitarianism is the appropriate framework for moral decisions and that individuals who prefer deontological solutions to moral dilemmas (involving harm) are heuristic and committing more moral errors (Baron and Ritov 2009; Sunstein 2005). However, heuristic, intuitive, and deontological thinking do not necessarily lead to immoral behavior. Rand et al. (2012) found that cooperation is intuitive and fast because cooperative heuristics are developed in daily life where cooperation is typically advantageous. Their research provided convergent evidence that intuition supports cooperation in social dilemmas and that reflection can undermine these cooperative impulses. Moral heuristics or deontology may be moral shortcuts or rules of thumb that lead to mistaken and even absurd moral judgments (Sunstein 2005). However, if one practices the moral patterns and rules in daily life, where morality is advantageous and admired, deontology could possibly lead to more moral behavior (Xu and Ma 2014). Another reason that supports utilitarianism over deontology is that previous studies mainly relied on

philosophical dilemmas such as the trolley and footbridge scenarios (e.g., Greene et al. 2001). It is argued that these classic abstract moral vignettes capture a particular kind of moral tension where the welfare of many (i.e., saving five lives at the cost of one) is pitted against one's reluctance to commit a personal act of violence (Knutson et al. 2010). Nevertheless, the moral dilemmas which are prevalent in daily life pit the fundamental motivation of following the rules against that of maximizing self-gain, such as corruption, tax evasion, or manipulation of account. This distinct class of moral tension, which is particularly present in organizational contexts, is not well examined from a "dual-process model" perspective. So will utilitarianism still be a more suitable decision framework in daily life as it is often presumed? Deontology is thought to be heuristic, fast, and rules of thumb. Can this moral shortcut lead to moral behavior?

We suggest that moral identity is one factor that helps us to know how deontology can lead to moral behavior. Individuals with strong moral identity are more sensitive to behavioral norms and principles. Reynolds (2008) found that not everyone pays the same attention to the moral aspects of life. Individuals who chronically perceive and consider morality in their experiences have the awareness to recognize the moral issue and therefore act morally. Formalists are fast heuristic moral decision makers, but if they also have strong moral identity so that moral schemes are easily accessible and activated, they are presumed to have more motivation to place moral concerns ahead of other concerns and act morally.

Cheating behavior is focused on in this study because previous research showed that honesty is one of the traits that people most frequently use to define moral character (Aquino and Reed 2002). Therefore, it is reasonable to assume that cheating behavior makes one no longer be regarded as a moral person (Aquino et al. 2009). On the other hand, cheating behavior is ubiquitous in our lives. Studies have demonstrated that telling lies is a common part of our daily conversations. In a sample of college students, 92 % admitted they had lied to a romantic partner (Knox et al. 1993). Surveys showed that thousands of high school students admitted lying to their parents and teachers (Ma et al. 2008). This analysis indicates that from a deontological perspective, people view honesty as a notable virtue and define cheating as a behavior that violates principle and is thus considered as immoral. However, in reality, cheating is more often a costless activity with potentially huge benefits. People are likely to approve of honesty over cheating in a hypothesized scenario but cheat in a similar real-life scenario. This feature of cheating behavior serves as an ideal basis for investigating the effect of moral judgment and moral identity on moral behavior (Reynolds and Ceranic 2007). It is reasonable to expect that formalists, who have strong moral identity, are responsive to principles and behavior norms, and the preference for deontology will lead to less cheating even if they have the opportunity. We predict the following:

Hypothesis 2 Moral identity will interact with moral judgment such that stronger moral identity and a greater preference for deontology will result in a more moral behavior.

Methodology

Reynolds and Ceranic (2007) suggested that an integrated approach to the study of moral behavior is not only justified but also informative. They found that in situations involving cheating behavior, though people are generally likely to differentiate right from wrong and make a moral judgment, individuals with strong moral identity are more likely to follow their inner moral compasses and act morally when they are facing a moral dilemma. Reynolds and Ceranic's work is an exciting start. However, their research has some limitations we intend to address in this study. First, their conclusions were based on two survey studies. We recognize that moral behavior such as cheating is a sensitive topic, and self-reported data suffer from social desirability bias. More importantly, the motivational force of self-benefit is poorly tested in a survey study as the self-gain at stake is indirect and intangible. It is worthwhile to test whether the result is robust when the gain is immediate and tangible. Second, Reynolds and Ceranic (2007) measured consequentialism (utilitarianism) and formalism (deontology) by asking people whether some character traits, such as being results-oriented or law-abiding, were important to them. We acknowledge that the instrument Reynolds and Ceranic used in their research was valid. However, we argue that operationalizing moral judgment in this way may be too abstract and lack contextual information. FeldmanHall et al. (2012) found that real moral decisions can dramatically contradict moral choices made in hypothetical vignettes. In reality, we make moral judgment in situations with abundant contextual information so that our actual moral choices are profoundly influenced by tangible rewards and consequences (FeldmanHall et al. 2012). Therefore, we suggest that people can theoretically define right versus wrong by referring to foundational moral frameworks. However, making a judgment in a decontextualized way is not equal to making a judgment within a real context. Therefore, moral judgment measured in an abstract way cannot predict moral behavior well. Actually, in Reynolds and Ceranic's (2007)

research, the main effects of moral judgment on moral behaviors were not significant in some analyses. To reduce the concerns mentioned above, in our study, we measure moral judgment in a scenario-based way, which provides abundant contextual information. Then we investigate to what extent this moral judgment in a hypothesized situation can predict moral behavior in a similar real scenario in an experimental study.

In the present research, we strive to deepen people's understanding about moral identity and moral judgment as well as their integrated effect on moral behavior. In the following sections, we report two studies that test these hypotheses. In study 1, we conducted a survey study to test the relationship between moral identity and moral judgment. We tested the hypothesis that moral identity is positively related with preference for deontology (Hypothesis 1). In study 2, we attempted to explore the integrated effect of moral identity and moral judgment on moral behavior in an experimental study (Hypothesis 2). Overall, this research aims to deepen our understanding of the perception of "who am I," reasoning about "what is right and wrong," and how these two factors interact together to shape moral behavior.

Study 1: A Survey on Moral Identity and Moral Judgment

In study 1, we used an online platform named 'Sojump' (http://www.sojump.com) to collect data. The trustworthiness of this platform was initially recognized by its good reputation in China, coupled with the idea that research using this platform was published in several relatively respected international academic journals (e.g., Zhou et al. 2012). Recently, research using Web-based data has become increasingly common (e.g., Kahneman et al. 2004; Rand et al. 2012), and scholars have found that online data are comparable to those from traditional (e.g., paper and pencil or lab) formats (Gosling et al. 2004).

Method

Sample

The participants in this study were 437 people who were enrolled in Sojump and were invited by e-mail. The sample consisted of 254 men and 183 women who ranged in age from below 20 to over 60. 23 % (102) of the participants identified themselves as younger than 25, 29 % (125) ranged in age from 26 to 30, 34 % (149) ranged in age from 31 to 40, and 14 % (61) were older than 40. All of them indicated that they were Chinese, and most of them (98 %) lived in mainland China.

Measures

Dependent Variable

Moral judgment, the preference for utilitarianism and deontology, was measured using vignette as follows:

> One furniture manufacturer employed workers to produce chair. The manufacturer paid once a week according to the number of chairs each worker made. Only the qualified chair would be paid after quality examination. Within the workers, Rex and Jason both made a lot of good quality chairs with few unqualified chairs. As time went by, the manufacturer expanded his business and needed to find a partner. He considered Rex and Jason as candidatures. Since they had the same job performance, the manufacturer found it difficult to make a decision. To further inspect them, this manufacturer came up with a new plan: he summoned all workers and announced that due to the time urgency, as long as the chair was made, all chairs would be paid without examination. After the rule changed, the chair production soared, but the relative defective rate also increased. The manufacturer found Rex made 100 chairs and all the chairs passed the quality check, whereas Jason produced 200 chairs, and 60 % of the chairs were qualified.
>
> The question is if you were the manufacturer, who would be your partner? State one of your main reasons.

We assumed that this business-related scenario involved competing objectives and obligations. It created space for both utilitarian and deontological reasoning. Brady and Wheeler (1996) had demonstrated that individuals can hold strong preferences for both utilitarian and deontological ideals, but we reduced the competing responses to one salient preference by asking them to provide the most important reason. Of the sample, 14 participants did not provide any reason. Only the 423 participants who had yielded a reason were included in data analysis henceforth. A strict standard based on Brady and Wheeler's (1996) measure of ethical viewpoint was employed to assess each participant's reason. Utilitarianism and deontology were represented by character traits. In the context of the present study, the main reason stated by the participant indicated the preference for utilitarianism or deontology. Two coders were trained to identify and distinguish four possible responses to be utilitarianism: (a) effective (e.g., "Jason was able to adapt to the changed rule"), (b) results-oriented (e.g., "Jason had made 120 qualified chairs after all" or "Quality was the foundation of business, Rex had 100 % qualified chairs"), (c) productive (e.g., "Jason was a

productive worker under new policy"), and (d) winner (e.g., "Jason made more chairs and won more money than Rex"). Five possible responses were coded as deontology: (a) principled (e.g., "Rex was a principled man"), (b) dependable (e.g., "We can depend on Rex" or "Jason was undependable"), (c) trustworthy (e.g., "Rex was trustworthy"), (d) honest (e.g., "Rex was an honest person"), and (e) law-abiding (e.g., "Rex was a law-abiding man under relative mild condition"). The coders were blind to the moral identity scores. The dependent variable was therefore composed of a two-level categorical variable coded 1 or 0 to represent utilitarianism or deontology, respectively. The proportional agreement between coders was .97 (411/423), indicating substantial convergence in ratings. It was noted that most of the remaining disagreements were on how to classify items like "Rex had higher quality." The authors argued that this reason focuses on the result of the product, and it was a consequential rather than deontological ideal. Disagreements were discussed by the coders and authors for both parties' agreement on how the participant's preference should finally be classified.

Independent Variable

Moral identity: Aquino and Reed's (2002) internalization and symbolization scales were used to measure this construct. The Cronbach's α reliabilities were .70 and .79 for the internalization and symbolization scales, respectively.

Control

This was a survey study, and we recognized that social desirability bias could strongly influence the responses of the participants. Therefore, we measured social desirability bias with the Eysenck Personality Questionnaire Lie (EPQ Lie) scale. The EPQ Lie was expected to relate with self-deceptive enhancement and impression management (Davies et al. 1998). We used 12 items ($\alpha = .78$) from the Chinese version of the EPQ-R short scale and included this measure of lies as the control (Qian et al. 2000). We also included gender and age as two control variables, since innumerable studies indicated that age and gender affect people's moral judgment.

Result

Of all the valid data, 160 participants were identified as having a preference for utilitarianism, and the rest, 263 participants, were coded as having a preference for deontology. Table 1 shows the means, standard deviations, and correlations of moral identity and the EPQ Lie.

To test Hypothesis 1, we conducted a binary logic regression model analysis with ethical predisposition as the dependent variable. We selected preference for deontology as the reference category and investigated this model in three stages. First, we entered the age and gender. Second, we entered the EPQ Lie responses, and finally, we entered the moral identity variables, internalization and symbolization. The likelihood ratio test meant that the model included five variables and significantly improved the model's fit compared to the null model, $\chi^2(5) = 23.688$, $p = .000$. The predicted frequency for preference for deontology and utilitarianism by logistic regression with the cutoff of 0.50 was 64.1 %. As Hypothesis 1 predicted, Table 2 shows that internalization negatively predicted utilitarianism even after age, gender, and EPQ Lie were controlled. For each point increase in the internalization score, the odds of being identified as utilitarian decreased from 1 to 0.553 (see Table 2). These results support our hypothesis that for individuals with strong moral identity, their moral schemas have achieved chronic accessibility, and they will prefer deontological ideals to utilitarian ideals. The effect of symbolization was not significant.

Discussion

The results of study 1 identify the relationship between moral identity and moral judgment. We found that internalization influences individual ethical predispositions when making moral decisions. For individuals who have successfully internalized moral standards and principles, the morality-related schemas are salient in their life experiences. They demonstrate a preference for deontological ideals and are more sensitive to rule-based behavior. It is not a surprise to find that the impact of symbolization was not significant. Symbolization reflects the degree to which moral identity is reflected in the respondent's actions in the world (Aquino and Reed 2002). This factor is about the public part of moral identity. Rather than affecting an individual's ethical predispositions, symbolization is expected to relate with behaviors as volunteering, donating items to the needy, and making donations to charities, which help symbolize his or her identity (Reynolds and Ceranic 2007).

Study 2: An Experimental Study of Moral Identity, Moral Judgment, and Moral Behavior

In study 2, we tested the hypothesis that moral identity and moral judgment will interact together to shape moral behavior. For individuals who have a preference for the deontological framework, if they also have a strong moral identity, they are more likely to act morally. The moral behavior of interest in this study is cheating behavior.

Table 1 Study 1: The descriptive statistics of research variables

Variable	*M*	*SD*	1	2	3
1. Age	28.91	7.876			
2. EPQ Lie	9.038	2.978	−.230**		
3. Internalization	4.293	.637	.101*	−.169**	
4. Symbolization	3.838	.596	.064	−.320**	.204**

$N = 423$. * $p < .05$; ** $p < .01$, two-tailed

Method

Subjects

We posted the recruitment on the campus as well as on one author's Facebook wall. Data were reported from 50 adults (30 females, 20 males, age 19–35, mean age 23.52). Participants came with diversified backgrounds. Nineteen of them were from Hong Kong, thirty of them from mainland China, and one participant was from Malaysia.

Measures

Moral Identity We measured moral identity using Aquino and Reed's (2002) internalization scales. The rationale for focusing on only the dimension of internalization is that what is really important for cheating behavior is not what people believe others think about their morality (measured by the symbolization subscale) but rather is that they see themselves as moral (the internalization subscale). We divided the sample into two groups based on the mean of the internalization score ($M = 4.45$, $SD = 0.35$). Half of the sample (25) whose scores were over the mean score was classified as the strong moral identity group, and the rest (25) was the faint moral identity group.

Moral Judgment The vignette created in study 1 was employed to measure each participant's ethical predisposition. Two coders used the same standard for coding each participant's preference. The proportional agreement between coders was .94 (47/50), indicating substantial convergence in ratings. Disagreements were discussed and finally solved.

Cheating Behavior We used a modified paradigm originally developed by Greene and Paxton (2009) to measure subjects' cheating behavior (Xu and Ma 2014). In order to protect subjects' privacy rightfully, subjects were asked to input a password as their subject ID at the beginning. Subjects were required to use their intuitive ability to participate in this game. Before the game began, they needed to complete 12 practice trials to be familiar with the task and ensure their task competence. At this moment, the experimenter pretended to receive a call and had to handle it immediately. After encouraging the subjects to follow the directions and solve anything with their own judgment, the experimenter left the room. Subjects were encouraged to use their intuitive ability to predict whether the computerized dice's number was "big" or "small," with 4, 5, and 6 being "big" and 1, 2, and 3 being "small." Trials appeared in random order in a series of 36 trials for each block. Of the total four blocks, two of them composed the "recording condition" (A), and the rest composed the "non-recording condition" (B) (four blocks appeared as ABBA or BAAB). Under "recording condition," subjects needed to press the F key for "big" or the J key for "small," which enables the computer to record their prediction, while under "non-recording condition," subjects kept their prediction in mind and pressed the Space key to continue. Then the dice appeared, and subjects were required to self-report whether their previous prediction was right or wrong. If the prediction was right, they would win the same money as the dice number. For example, if the number was 5, and the self-report shown on their previous prediction was right, then subjects would get $5 in the trial. However, if the dice was 4, 5, or 6, and the self-report result was wrong, which meant previous prediction was "small," they would lose $2 (average of 1, 2, and 3). If the

Table 2 Study 1: The logic regression of moral identity on moral utilitarianism and deontology

Variable	Model 1	Model 2	Model 3				
	B	*B*	*B*	SE	Wald (df = 1)	*p*	Exp(*B*)
Constant	0.408	−0.692	1.129	1.236	.835	.361	3.093
Age	−0.129	−0.075	−.059	.095	.380	.537	.943
Gender	−0.243	−0.184	−.112	.213	.273	.601	.894
Lie (social desirability)		0.086*	.088*	.038	5.225	.022	1.091
Internalization (moral judgment)			−.593**	.166	12.795	.000	.553
Symbolization (moral judgment)			.141	.188	.560	.454	1.151

$N = 423$ for all models. Unstandardized regression coefficients are shown

Male = 0, female = 1; Utilitarianism = 1, deontology = 0. * $p < .05$; ** $p < .01$, two-tailed

dice was 1, 2, or 3, and the self-report result was wrong, which meant their previous prediction was "big," they would lose $5 (average of 4, 5, and 6). The non-recording condition provided subjects with opportunities for cheating given that the prediction's accuracy was totally based on subjects' self-report result. The self-reported accuracy under the non-recording condition was an index of cheating behavior. Other than the behavior data, we also paid attention to subjects' processing speed of their moral decision. The software Paradigm (http://www.paradigmexperiments.com) was used to record each participant's reaction time under the non-recording condition. This particular data were closely related to the distinction between automatic and controlled processing. Subjects were paid the cumulative value of their gains/losses. Net losses were capped at $40, and net winnings were capped at $400 (USD 1 = HKD 7.75).

Manipulation Check Table This table consisted of several statements like "There was an opportunity to cheat." Subjects were asked to rate the statements using a five-point scale (1 = do not agree at all, 5 = agree very much).

Procedures

In order to ensure that subjects were capturing different degrees of moral awareness and not social desirability concerns, we used a cover story created by Greene and Paxton (2009) to conceal the real purpose of this study. Participants were led to believe that they were joining an intuitive test which consists of several unrelated tasks. Participants were first required to finish a questionnaire that included the moral identity scale and EPQ-R short scale as in study 1. Then they needed to read the vignette, which measured their moral judgment. After that, they were instructed to play a gambling game on the computer.

When the experiment was over, participants completed a postexperiment survey that consisted of a manipulation check table and moral identity scale which had items in a different sequence than the prior one. After debriefing and getting the due rewards, each subject left the lab.

Result

The manipulation table with a five-point scale was used to rate each participant's perception of the experiment (1 = do not agree at all, 5 = agree very much). The results show that participants agreed that "the task can gauge people's intuitive ability in some sense" ($M = 4.02$, $SD = 0.82$), "there was an opportunity to cheat" ($M = 4.26$, $SD = 0.56$), "I'm not secretly monitored during the task" ($M = 4.10$, $SD = 0.84$), "my participation was anonymous" ($M = 4.56$, $SD = 0.67$), and "I am supposed to be honest" ($M = 4.72$, $SD = 0.50$). This result indicates that participants agreed that they were supposed to be behaving honestly in a task which provided an opportunity for obtaining gains dishonestly and anonymously. In the debriefing, participants were asked to describe the purpose of this study with their own words. No one realized that the gambling game was used to assess dishonest behavior. Based on these results, it was convincing that subjects were led to believe that (1) they had the opportunity to gain something dishonestly and anonymously, (2) this defect was an inevitable arrangement of the experimental design, and (3) they were expected to behave honestly during the task.

As expected, participants reported a significantly high level of accuracy under the non-recording condition than under the recording condition ($M = 0.63$, $SD = 0.14$ vs. $M = 0.54$, $SD = 0.09$, $t(49) = 4.97$, $p < .001$, Cohen's $d = 0.777$). The self-reported accuracy under the non-recording condition was improperly higher than the expected accuracy of .50 ($t(49) = 6.68$, $p < .001$). Because the self-reported accuracy was remarkably higher than the expected value, we can safely claim that the inflation of accuracy indicated participants' dishonest behaviors. We emphasize further that our manipulated effect for inducing dishonest behavior was very rigid and conservative ($p < .001$).

Of the 50 participants, 26 were identified as having a preference for deontological ideals, and 24 were classified as having a preference for utilitarian ideals. A Chi square analysis was performed, and we found the relationship between moral identity and moral judgment was significant [$\chi^2(1) = 11.54$, $p = .001$]. The results confirm the finding in study 1 that individuals who preferred utilitarian ideals usually had faint moral identity. In contrast, individuals who depended on the deontological framework were more likely to have strong moral identity. Furthermore, compared to the individuals who preferred utilitarian ideals, the individuals who preferred the deontological solution had significantly fast reaction time under the non-recording condition ($M = 722.40$, $SD = 232.94$ vs. $M = 612.95$, $SD = 130.71$, $t(47) = 2.06$, $p = .045$, Cohen's $d = 0.579$). This result provides evidence that formalists make decisions from automatic processes so that it is relatively fast, while utilitarian adherents make decisions from controlled processes, which requires additional time.

Table 3 shows self-reported accuracy under the non-recording condition among different participants. This table depicts the motivational role of moral identity. It seems that deontology coupled with strong moral identity was the best predictor of moral behavior. It's noteworthy that if strong moral identity was linked with utilitarian ideals, it also possibly led to immoral behavior.

We chose self-reported accuracy under the non-recording condition as the dependent variable and conducted a

Table 3 Study 2: Cheating behavior among different groups

	Moral identity					
	Faint			Strong		
	N	*M*	*SD*	*N*	*M*	*SD*
Moral decision						
Utilitarianism	18	.61	.14	6	.69	.11
Deontology	7	.74	.12	19	.60	.14

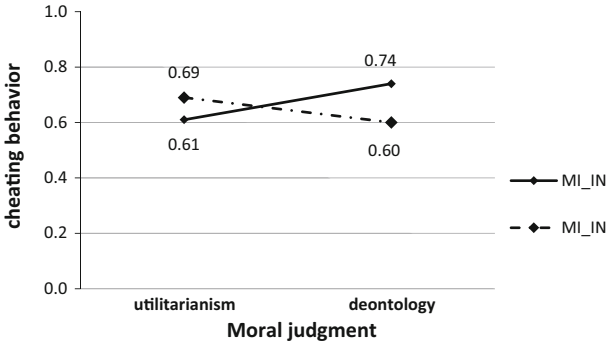

Fig. 1 The interaction of internalization and moral judgment on cheating behavior. Cheating was measured by the self-reported accuracy at non-recording condition

MANOVA with moral identity and ethic predisposition as two independent variables. As noted from Table 4, the main effects of ethic predisposition and moral identity on cheating behavior were both not significant. Preferences for deontology or utilitarianism did not necessary lead to more moral behavior. However, we did find a significant interaction between ethic predisposition and moral identity ($F(1,46) = 5.95$, $p = .019$, partial $\eta^2 = 0.115$). This result indicates that moral judgment would interact with moral identity to shape moral behavior.

Representations of the interaction effects are presented in Fig. 1. With regard to the individuals who preferred a utilitarian framework, no matter whether their moral identity was strong or faint, the self-reported accuracies were not significantly different [$F(1,46) = 1.25$, $p = .27$, partial $\eta^2 = 0.027$]. In contrast, for those who preferred deontological ideals, if their moral identity was strong, they cheated significantly less than the individuals whose moral identity was faint [$F(1,46) = 5.63$, $p = .022$, partial $\eta^2 = 0.109$]. This result supports our main argument that moral identity and moral judgment act together to shape moral behavior.

Discussion

The results of study 2 provide additional evidence about the relationships between moral identity, moral judgment, and moral behavior. Individuals who preferred utilitarian ideals usually had faint moral identity, while individuals who preferred the deontological framework were more likely to have strong moral identity. More importantly, we found that neither moral judgment nor moral identity itself was powerful enough to impact moral behavior. Moral identity needs to couple with deontology, not utilitarianism, so that it can lead to moral behavior. These results support the main argument that moral identity and moral judgment act together to shape moral behavior. Deontology interacted with internalization in such a way that when deontology was coupled with the motivating force of moral identity, moral behavior was at its highest level. These results are consistent with Reynolds and Ceranic's (2007) research. In the context of cheating, there was enough room for moral ambiguity. Deontology condemned cheating as immoral, while utilitarianism made cheating morally valid. Initially, we proposed that deontology would be positively related with moral behavior, but this argument was not supported by the result. Though deontology pointed out the right direction, this did not guarantee that people would do the right thing. After a moral judgment was made, the person needed the motivation to translate the moral judgment to moral behavior. Overall, study 2 justifies the effort of an integrated approach to moral behavior.

General Discussion

In this research, we first established the relationship between moral identity and moral judgment. After that, we demonstrated how moral judgment can interact with moral identity to determine moral behavior. Study 1 and study 2

Table 4 Study 2: A MANOVA test result: the effect of moral judgment and moral identity on cheating behavior

Source	Sum of squares	df	Mean square	*F*	*p*	Partial η^2
Within cells	0.85	46	0.02			
Moral judgment	0.00	1	0.00	0.19	.663	0.114
Moral identity	0.01	1	0.01	0.65	.424	0.014
Moral identity × moral judgment	0.11	1	0.11	5.95	.019*	0.115
Model	0.13	3	0.04	2.30	.090	
Total	0.98	49	0.02			

both provide evidence that there was a relationship between moral identity and moral judgment. Individuals with strong moral identity were likely to depend on the deontological framework when making a moral judgment, while individuals with faint moral identity preferred utilitarian ideals when making a moral decision. Study 2 shows that neither moral identity nor moral judgment was strong enough to determine moral behavior. Moral identity played the motivating role in moral behavior, but that power would not lead to moral behavior without moral judgment presenting the right direction. Equally, moral judgment pointed out the right direction, but people would not follow the right direction if they were not motivated to. Generally speaking, these results confirm the necessity to incorporate moral identity and moral judgment in studying moral behavior.

Previous research exploring moral decisions from a dual-process perspective has largely focused on the error-prone and biased part of deontology in hypothetical moral dilemmas. Greene and his colleagues have collected convincing behavioral and neurobiological evidence to show that deontological judgments are cognitive errors and often lead to undesirable results (e.g., Greene et al. 2001; Greene 2007; Greene and Paxton 2009). Some researchers, such as Baron and Ritov (2009), make the assumption that decisions made on the basis of deontological principles usually lead to pervasive and dangerous errors in moral judgment. The present study, however, demonstrates that making decisions on the basis of the deontological framework does not necessarily lead to immoral behavior if the individuals have a strong moral identity. While for individuals who preferred utilitarian framework, whether their moral identities were strong or faint, the behavior was not significantly different. Utilitarianism may be appropriate in hypothetical scenarios that involve harming one to save many. In daily life, deontology is more likely to lead to moral behavior if people have practiced moral patterns and principles frequently so that moral schemas are easily accessible. In daily life, individuals who have strong moral identity have practiced the moral scripts and principles numerous times; those deontological rules and values used by them constitute a world view, also called world model, which serves as a tool for decision process (Pugh 1977). Individuals need this model of the environment to evaluate the consequences of alternatives. If a society succeeds in indoctrinating and encouraging those values, individuals would strive to follow the rules as efficiently as they can. This mode of behavior is inevitable because that is how the individual is designed as an adaptive-driven system from evolutionally perspective (Pugh 1977). In the daily contexts of repetition, reputation, and sanctions, moral behaviors are also typically beneficial to them so that these behaviors become people's intuitive responses. These arguments are consistent with the finding by Rand et al. (2012) that intuition supports cooperation in social dilemmas.

This research contributes to our knowledge about the unique qualities of internalization and symbolization. Internalization had a more robust relationship with moral judgment and moral behavior than did symbolization. Internalization reflected the personal representation of moral concepts (Aquino and Reed 2002; Aquino et al. 2009). Reynolds and Ceranic (2007) argued that an internalized moral identity seems consistent with traditional concepts of acting morally, whereas symbolization does not. For individuals who have high internalization and their moral schemas have attained chronic accessibility, their radar screens are sensitive to moral concepts so that their preference for the deontological framework emphasizes the patterns and rules of behavior (Lapsley and Narvaez 2004). Deontological concepts act as some prototypical programs or strategies for decision making. The moral values such as justice and care are the conceptual representations in the dual-process model (Kahneman 2003). For those individuals who have strong moral identity, they have rich experiences in practicing these conceptual representations in everyday life, so that these moral values, which are deontological in nature, are often invoked, usually implicitly, in solving moral problems. Furthermore, since they strongly value morality and pursue the goal of being a moral person, their moral compasses are more likely to lead them to present moral behavior in a moral dilemma (Gino et al. 2011). In contrast, if the internalized part of moral identity is not salient, moral schemas and the rules of behavior are not accessible at the moment of moral judgment. Accordingly, individuals would be dominated by utilitarian ideals and focus on the outcome of the behavior. In this case, individuals possibly fail to see the moral elements of a situation and present unethical behavior.

As mentioned earlier, we argued that compared with the ethical adherents of utilitarianism, who focused on the outcome of behavior, formalists were responsive to principles and behavior norms, and they labeled cheating as immoral behavior, so it was reasonable to expect that those people would commit less cheating even when they had the chance. However, the result indicates that moral judgment did not exert enough effect on moral behavior. Though people know what is right and wrong at the cognitive level, this does not mean they would practice what they know. This result is an echo to the literature on moral hypocrisy (e.g., Batson and Thompson 2001; Batson et al. 1999). It is a sort of weakness of present work that rather than using well-validated instruments to measure moral judgment, we introduced a new vignette to explore individuals' moral judgment. Though suffering from losing part of the

validity, it is noteworthy to emphasize that the inherent structure of the vignette and the experiment are quite similar. We argue that it is enlightening to compare individuals responses in these two similar tasks. The recording condition in the experiment was comparable to the old rule in the vignette in which a produced chair would be paid after a quality check, and the non-recording condition was similar to the new rule that all made chairs would be paid without a quality examination. The claim that people would not practice what they thought in mind is more alarming when we saw the inconsistency between the moral judgment in a hypothetical scenario and the moral behavior in a similar real situation. This result provides additional evidence about the limitations of cognitive approaches in studying moral behavior (e.g., Blasi 1980, 2004; Krebs and Denton 2005).

Perhaps the most important result of this research is that it provides additional evidence of the need for an integrated approach to the study of moral behavior (Hardy 2006; Reynolds and Ceranic 2007). The interaction effect between moral identity and moral judgment delimitates the complexity of morality and moral behavior. Reynolds and Ceranic (2007) found that internalization interacted with both utilitarianism and deontology to lead an individual to the most extreme or idyllic of solutions. This means that consequentialists with a strong moral identity would demonstrate the most utilitarian way, while formalists with a strong moral identity would follow the most deontological manner. In our study, we also found that deontological ideals coupled with a moral motivation led to moral behavior; however, the interaction effect between utilitarianism and moral identity was not significant. One reason for this inconsistency is that the combined effect of internalization and utilitarianism on behavior is not as robust as the joint effect of internalization and deontology, which was also demonstrated in Reynolds and Ceranic's (2007) research. The other reason is possibly that our result was based on a relatively small sample. Though the data show the trend that when consequentialists were motivated with strong moral identity, they would cheat more, the result did not reach the statistically significant level. More generally, the results remind us that neither moral identity nor moral judgment guarantees moral behavior as we thought previously (e.g., Blasi 1980; Reynolds 2003). A moral agent under a moral dilemma is like a man driving a car in the sense that moral identity acts like the accelerator that provides the power, while the moral judgment acts like the steering wheel that controls the direction. The person needs both the power and the direction so that he can successfully go through the moral dilemma and arrive at the morally right place.

The limitations of this research show directions for further study. First, rather than the traditional practice of measuring moral judgment by moral developmental stage (e.g., Rest 1986), we conceptualized moral judgment as the ethical predisposition. Measuring moral judgment by ethical predisposition is a worthy try; however, we acknowledge that reexamining the results of this research from the perspective of the cognitive developmental model would locate the conclusions in the mainstream of moral psychology (Kohlberg 1984; Rest 1986). Second, moral behavior in this study was limited to one specific moral behavior—cheating behavior. As we discussed earlier, there is moral ambiguity regarding cheating behavior. Reasoning from deontology or utilitarianism leads to opposite directions. In Reynolds and Ceranic's (2007) opinion, people did not have a high social consensus regarding cheating behavior. Reynolds (2006) found that preferences for utilitarianism and deontology can influence moral awareness. Formalists recognized both harm and the violation of a behavioral norm as indicators of the moral issue, whereas utilitarianism adherents responded only to harm. We argue that cheating behavior is a moral issue that only violated behavioral norms. Cheating as a moral issue is what formalists are sensitive to, not the utilitarianism adherents. This partly explains the reason why the effect of utilitarianism on behavior was not significant in our research. Future studies would benefit from efforts that included different moral issues, such as investigating behavior that harms other people. Third, we measured moral identity and predisposition at the same time in present study. Though we introduced these tasks as unrelated, it is still concerned that the measurement of moral identity might influence the behavior. In the further studies, it is more appropriate to measure moral identity and predisposition independent of moral behavior in a separate session or at least counterbalance the order of measures.

Conclusion

Moral identity influences individual ethical predispositions when making moral decisions. For individuals who have successfully internalized moral standards and principles, morality-related schemas are salient in their life experiences. They demonstrate the preference for deontological ideals and are more sensitive to rule-based behavior than outcome-based behavior. More importantly, neither moral judgment nor moral identity itself was powerful enough to exert moral behavior. Deontology interacted with internalization in such a way that when deontology was coupled with the motivating force of moral identity, moral behavior was at its highest level.

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