Integrating moral identity and moral judgment to explain everyday moral behavior: a dual-process model

Zhixing Xu
Hong Kong Baptist University

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Integrating Moral Identity and Moral Judgment to Explain Everyday Moral Behavior: A Dual-Process Model

XU Zhixing

A thesis submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Principal Supervisor: Prof. MA Hing Keung

Hong Kong Baptist University

July 2014
Declaration of Originality

I hereby declare that this thesis represents my own work which has been done after registration for the degree of PhD at Hong Kong Baptist University and has not been previously included in a thesis, dissertation submitted to this or other institution for a degree, diploma or other qualification. Information derived from the published and unpublished work of others has been acknowledged in the text and references are given in the list of sources.

XU Zhixing
Hong Kong Baptist University
July 2014
Abstract

A dual-process framework argues that both intuition and reflection interact to produce moral decisions. The present dissertation integrated moral identity and moral judgment to explain moral behavior from the dual-process model and its account was tested by three studies. A typical everyday moral behavior of interest in the present research was honest behavior. Participants were introduced to use their intuitive ability to predict the dice number demonstrated on a computer. The reward will base on their self-reported accuracy. Studies examined cheating behavior of individuals who had a chance to lie for money. In study 1, sixty participants with diversified background were recruited in a laboratory study. The results supported that honest behavior was more an intuitive result than a reflective outcome. Honest behavior resulted from the absence of temptation and priming moral constructs increased honest behavior. Study 2 contained two parts, in the first part, the researcher developed a Chinese version of moral identity based on Aquino and Reed’s (2002) work, in the second part, fifty-eight participants’ moral identity was investigated by the instrument in the first part. Their honest behavior was measured in the same task adopted in study 1. The result confirmed that different mechanisms led different people to behave ethically. For people who had strong moral identity, honesty resulted from the absence of temptation, while for individual with weak moral identity, honest behavior resulted from the active resistance of temptation. In study 3, moral identity and moral judgment were integrated to explain moral behavior. A Web-based survey with 437 subjects showed that the relationship between moral identity and moral judgment was significant. Individuals who viewed themselves as moral people preferred formalistic ideals to utilitarian framework when making moral judgment. The follow-up experimental study demonstrated that moral identity and moral judgment interacted together to determine moral behavior. When formalism was coupled with the motivational power of moral identity, individuals were most likely to behave morally.
Acknowledgement

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Chapter 1 Introduction

The opening of Plato’s Republic\(^1\) includes a so-called “Ring of Gyges” story:

An unnamed ancestor of Gyges was a shepherd in the service of the ruler of Lydia. After an earthquake, a cave was revealed in a mountainside where he was feeding his flock. Entering the cave, he discovered that it was, in fact, a tomb with a bronze horse containing a corpse, larger than that of a man, who wore a golden ring, which he pocketed. He discovered that the ring gave him the power to become invisible by adjusting it. He then arranged to be chosen as one of the messengers who reported to the king as to the status of the flocks. Arriving at the palace, he used his new power of invisibility to seduce the queen, and with her help he murdered the king, and became king of Lydia himself (Republic, Book 2, p 37).

The character of Glaucon, who is the brother of Plato, asks whether any man can be so virtuous that he could resist the temptation of being able to perform any act without being known or discovered. This is the famous “Glaucon challenge” in history. Glaucon suggested that morality is only a social construction, the source of which is the desire to maintain one’s reputation for virtue and justice. Hence, if that sanction were removed, one’s moral character would evaporate. Obviously, sages and men of virtues in both Eastern and Western are not satisfied with Glaucon’s interpretation of morality. In the classic “The Analects of Confucius”, Confucius said:

To eat coarse greens, drink water, and crook one’s elbow for a pillow — joy also exists therein. Wealth and high rank obtained by unrighteous means are to me like the

floating clouds (The Analects of Confucius, Book 7.16).

Confucius puts right / righteousness (Yi 義) over wealth and reputation, even when adhering to righteousness would lead to poverty. Confucius’ attitude to wealth and reputation echoes what is written in the Bible: “The acquisition of treasures by a lying tongue is a fleeting vapor, the pursuit of death” (Bible Proverbs 21:6). In Glauccon’s mind, external rewards such as reputation, or punishment, like confinement explains the entire thing. However, in Confucius’ mind, the values inside are more important than the outside temptations.

Glauccon’s approach to morality is mainly an external cost-benefit perspective. From this perspective, people carry out moral behavior deliberatively by trading off the expected external benefits against costs of the immoral behavior (Sandmo, 2005). This external cost-benefit calculation represents the effect of environmental events on behavior patterns. The cost-benefit analysis of behavior goes back at least to Bentham and Mill, and it is usually referred as utilitarianism in philosophy (Bentham & Mill, 1973). An influential modern version of this kind of formulation is the subjective expected utility (SEU) model, which is the footstone for the standard economic model of rational and selfish human behavior (i.e., homo oeconomicus) (Becker, 1976; McKenzie & Tullock, 1984). The SEU model believes that people do the cost-benefit calculation and choose an act which would maximize their interest (Demeulenaere, 1996). The SEU model not only is now applied to explain economic decision but also has been extended to the understanding of ethical issues (Birkbeck & LaFree, 1993;

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Farrington, 1979). From this angle, people would consider three aspects when they come across an opportunity to get dishonest gain: the expected amount of gain taken from the dishonest act, the probability of being caught, and the magnitude of punishment if caught in this act (Mazar, Amir, & Ariely, 2008). On the basis of these inputs, people reach a decision that maximizes their interests. Thus, within this frame, people are moral or immoral only to the extent that the planned trade-off favors a particular action (Hechter, 1990; 1993).

However, can moral itself be worthwhile as what the sages claimed? What is the psychological mechanism that leads to moral behavior? Is it possible that being moral is an instinct need that one would pursue the goal of being moral at the cost of somewhat external reward? From a psychological perspective, in addition to financial considerations, another set of important inputs to the decision whether to be moral is based on internal rewards. Psychologists show that, as part of socialization, people internalize the norms and values of their societies (Bandura, 2001; Henrich et al., 2001), which serve as an internal benchmark against which people compare their behaviors. These internalized norms and values become one’s moral compass that points out what is a right and moral behavior. These internalized value systems compose an important part, if not the central part, of one’s self-identity (Blasi, 1980; 2004). Compliance with the internal values system provides positive rewards (i.e., sense of pride), whereas noncompliance leads to negative rewards (i.e., sense of shame). The most direct evidence regarding the existence of such internal reward mechanisms comes from brain imaging studies revealing that acts based on social
norms, such as altruistic punishment (costly punishment behaviors that confer benefits on other individuals) and social cooperation activated the same primary reward centers in the brain (i.e., nucleus accumbens and caudate nucleus) that external benefits such as preferred food, drinks, and monetary gains did (De Quervain et al., 2004; Singer et al., 2004).

In this research, the researcher aims to provide his answer to the “Glaucon challenge.” The author wants to explore whether it is possible and to what extent one would behave morally even when explicit sanction does not exist.
Chapter 2 Literature Review

This dissertation concerns moral identity and moral judgment, and their interactional effect on moral behavior. The research about morality goes beyond just psychology and has drawn researchers from cross disciplines. This chapter begins with literature relevant in moral philosophy, because philosophical views about morality set an important background for some modern scientific research about morality. Then, the researcher will overview literature in moral psychology, especially trace back to research by Kohlberg (1969), Rest and Barnett (1986), as well the social intuition model proposed by Haidt (2001). After that, the researcher will do a brief review about the most current work in cognitive neuroscience which seeks to look at the biological foundation of moral processing. The researcher also spends some time on the recent pieces of evidence on moral neuroscience that indicate a dual-process model, which will be used as a main framework in this dissertation. Finally, the theoretical journey will be ended after arriving at an approach of integrating moral identity and moral judgment to explain moral behavior.

Moral Philosophy

The field of moral philosophy, which is also commonly refers as ethics, involves systematizing, defending, and recommending concepts of right and wrong behavior. Ethics usually includes four branches: metaethics, normative ethics, applied ethics, and descriptive ethics (Stumpf & Fieser, 2006). Metaethics is the study about the property
of evaluation of ethics, and applied ethics is a study of how to put ethics into practice. Normative ethics is the ethics theories that prescribe how people ought to act. It contrasts with descriptive ethics that describe people’s beliefs about morality. In this dissertation, the author only focuses on normative ethics, which is also known as prescriptive ethics, a study about principles that make actions right and wrong. It is normative ethics that offers overarching norms or principles that one could appeal to in resolving difficult moral decisions and providing an intersection between moral philosophy and moral psychology. Normative ethics seeks to describe what people ought to be rather than what people would be. It is important to know this “ought/is” distinction between moral philosophy and moral psychology (Searle, 1964). Moral philosophy aims to figure out what is right or wrong, while moral psychology seeks to discover what moral standards people really embrace in their mind (e.g., Haidt, 2001).

In history, philosophers were concerned in different parts of moral action and have emerged different generic theories of normative ethics, such as stoicism, hedonism, Cyrenaic hedonism etc. (MacIntyre, 1998; Rawls & Herman, 2009). However, this part mainly describes the skeleton knowledge of three influential theories which are relevant to the present dissertation: virtue ethics, utilitarianism and deontology. These three theories are also common regarded as the three fundamental theories in normative ethics.

**Virtue Ethics**

Virtue theory is almost the oldest normative tradition in Western philosophy, having its foundation back to Socrates, Plato and Aristotle in the Western. According to
the virtue theory, eudemonia or happiness is the end of human endeavor, and a virtuous character is ruled by practical goals that lead to a fulfilling and delightful life. Plato emphasized on the importance of developing good characters such as courage, justice, and generosity. This approach focuses on the agent who carries out the action. “What kind of person should I be?” is the central question of virtue ethics. Aristotle claimed that achieving a virtuous character should be the goal for human’s life (Ross & Brown, 2009). To cultivate and attain these virtues are the primary purpose of life. In order to have a virtue, one has to learn and practice that virtue many times to become one’s disposition and habitation (Ross & Brown, 2009). Virtue ethics provides its answer to the Glaucon’s challenge, achieving virtue is worthwhile in itself, and eudemonia is the outcome of a virtuous life as well as the purpose of all human lives. In the Eastern, Confucianism can be classified as another virtue theory in which Confucians claimed a set of virtues, such as Benevolence (Ren 仁) and Right / Righteousness (Yi 義), which was both universal and secular. Based on these virtues, the Confucian school has developed an ethical system to both people’s daily lives and their political lives. Hwang (1995) subdivided the Confucian ethics for interpersonal relationships into two categories: Filial piety is ethical system for ordinary people and Loyalty is the ethical system for scholars. The former category is the core value of Confucianism and should be followed by everyone including scholars. Virtue ethics is particularly relevant to this dissertation since moral identity is based on moral characters, and the characters need to be repeated many times in one’s life to become one’s salient feature. In a given

culture, such as in Chinese culture, one need to find out the virtues that cherished by Chinese people.

**Consequentialism**

Rather than virtue ethics focusing on an agent who executes an action, consequentialism emphasizes the result of an action. An action is morally correct or not depends on its consequence. Different types of consequentialism have different principles on what consequences are, for whom the consequences should be considered, and what the “best” consequence means. In philosophical history, consequentialism is usually referred to as utilitarianism, which defines all moral actions as a function of their utility (Bentham & Mill, 1973). The researcher would use the term “utilitarianism” hereafter. Philosophers, such as Bentham believed that the value of an action can be calculated by measuring the amount of pleasure that resulted and contended that a moral act is that which maximizes the good or benefit (Bentham & Mill, 1973; Brady & Wheeler, 1996). Another utilitarian Mill, settled upon “the Greatest Happiness Principle” as a key to his doctrine. “Actions are right if they tend to promote happiness, wrong if they tend to produce the reverse of happiness” (Mill, 1998). While most researchers agree that utility is of importance in considering morality, perhaps, it is not the only value that should be considered. It is not easy for utilitarian to justify his or her answer to questions like “whether it is morally correct to kill an innocent individual to benefit a large community.” The extreme utilitarian would say it is morally correct to do that since this behavior leads to more utility after trade-off. However, this utilitarian solution cannot satisfy all people, especially for those with
tender heart.

Deontology

Deontology is an influential theory on par with utilitarianism. Utilitarianism 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 & Wheeler, 1996; Kant & Gregor, 1996). Deontology and utilitarianism are frequently discussed in tandem as they are usually thought as two opposing theories. German philosopher Immanuel Kant is commonly discussed as a central figure in deontological ethics. In his seminal work “Groundwork of the Metaphysic of Morals,” Kant constructed his duty-based ethics by arguing that the only virtue that can be unqualifiedly good is a good will. A good will is unique and unconditional good even if the outcome fails to achieve its moral intention (Kant, 2002; Kant & Gregor, 1996). This is the main distinction between deontology and utilitarianism. From Kant’s perspective, a moral action is only praiseworthy if it is performed out of duty. This means that, if one performs an action out of other desires, such as to achieve a loyal virtue (which is embraced by virtue ethics) or maximizes the benefits (held by utilitarianism), it is not praiseworthy. Kant is also famous for his formulation for moral rules. The first and most important rule is universalizability. This first law is also called Formula of the Universal Law of Nature, and all moral behaviors need to follow this law.

*Act only according to that maxim by which you can at the same time will that it should become a universal law.* (Kant, 2002, p 40)
In the *The Analects of Confucius*, Zigong asked, “It there a single saying that one may put into practice all one’s life?” Confucius said, “That would be ‘reciprocity’: That which you do not desire, do not do to others (己所不欲勿施於人).” (Analects, 15.24)

At the first sight, Confucian silver law is quite similar to Kant’s Universal Law of Nature. However, Confucian maxim is actually quite different from Kant’s universal law though both emphasize the obligation of an individual to adhere to moral principles. Confucian silver law is subjective while the universal law is objective, one is a negative duty and the other is a positive duty (Hwang, 1995; 1999).

In reality, however, it is not easy to solve a moral dilemma if different moral principles conflict. If all actions have their inherent righteous and one has inviolable duty to all of them, how can people have a moral life? Deontologists cannot provide satisfactory answer to the challenge, such as “if it is acceptable to lie to a murderer who is asking for a victim’s location”. A pure deontologist would argue that it is never morally acceptable to lie to others. However this morally correct choice would kill the victim if the murderer gets the true information. Obviously, utilitarian solution is more convincing and appealing in this scenario. The parallel development of these two conflicting theories becomes two influential frameworks that people depend on when making moral judgment (Brady & Wheeler, 1996). Depending on the property of the dilemma, people would either show a preference to utilitarian judgment or deontological judgment. The recently cognitive neuroscience has provided insight about biological foundation involved in these decisions. The author will discuss this further later.
Moral Psychology

The field of moral psychology is dominated by Kohlberg’s thinking for decades. Traditional moral psychologists, such as Piaget and Kohlberg, underline the importance of moral development, especially the principal role of moral reasoning. They make an assumption that sophisticated moral reasoning leads to moral behavior. One’s moral reasoning is at higher moral developmental stage, he or she is more likely to be moral (Kohlberg, 1969; Piaget, 1932). Challenging the dominated role of rationalism, history has been kept echoing the voice of emotivism alternative. Hoffman argued that empathy is the spark of human concern for others, and the development of empathy should be the foundation of moral development (Hoffman, 1990; 2001). Haidt presented his social intuitionist model (SIM) as an alternative to rationalist models. He claimed that “moral reasoning does not cause moral judgment; rather, moral reasoning is usually a post hoc construction, generated after a judgment has been reached” (Haidt, 2001). Nowadays, researchers come to a consensus that both reasoning and intuition are involved in moral cognition though they may play competing role sometimes.

*Moral Reasoning/Cognitive Development Model*

Freud proposed that superego is the internalization of moral principles that regulate people’s behaviors (Freud, 1949). In early 1930, Piaget conducted the groundbreaking research about children’s moral development. He claimed that the maturity of children’s cognitive ability is the foundation of their moral judgment (Piaget, 1932). Based on Piaget’s works, Kohlberg developed a six-stage moral
development model when he was pursuing his Ph.D. in Chicago University. He explained how children’s cognitive ability progress from stage to stage and argued that the sequence of his six stages is invariant for all people (Kohlberg, 1969; 1981). Kohlberg divided these six stages into three levels: Level 1 preconventional morality includes stage 1: punishment orientation and stage 2: reward orientation; Level 2 conventional morality includes stage 3: good-boy/good-girl orientation and stage 4: authority orientation; and Level 3 postconventional morality composes of stage 5: social-contract orientation and stage 6: ethical principle orientation. To measure these stages, Kohlberg designed a series of moral dilemmas such as “Heinz Steals the Drug” that were administered in a guided interview-style testing. Not the answer but the reasoning the subjects provide to justify their answer were used to represent one’s moral developmental stage. Though Kohlberg’s work received lot of criticism for its focusing narrowly in Western culture (e.g., Ma, 1992; 1989) and being sexist (Gilligan, 1977), his theory inspired most of the leading researchers in the moral psychology today, and, from then on, moral psychology has been dominated by rationalist models of moral judgment, and there appears to be a consensus that moral judgment is a cognitive aspect of moral development (Lapsley, 1996).

Inspired by Kohlberg, Rest proposed his influential descriptive four-component model of ethical decision making (Rest & Barnett, 1986). Rest claimed that individuals confronted with ethical decision went through the following four components:
Rest and Barnett (1986) argued that when an integrated ethical decision making and behavior happened, 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. He argued that each component in the process is conceptually distinct and that success in one stage does not imply success in any other stage. For example, a person with a well-developed sense of moral reasoning (have high moral development) does not guarantee that he would act morally. It’s noteworthy that these four components do not necessarily be linked in linear order though Rest did not delineate and explain clearly under which conditions these four components would cascading connect in his model.

Almost at the same year when Rest proposed his four-component model, Trevino published his person-situation interactionist model of moral decision (Trevino, 1986). Trevino integrated individual’s factors such as stage of moral development, locus of control and situational factors such as organizational culture and time pressure to explain moral decision. Other than individual factors and situational factors that will affect moral decision, Jones suggested that moral issue itself, such as the moral intensity, will affect moral decision-making process (Jones, 1991). Those conventional theories emphasize on different parts of moral decision, however, they all strongly believed the dominated role of rationalism in humans (Krebs & Denton, 2005). Scholars from this approach assume that reasoning would lead people to evaluate the situation and make a moral decision. However, this assumption has received more and more opposing empirical data recently (see reviews in Haidt, 2001 and Krebs & Denton,
Moral Intuition/Social Intuitive Model

Debate about the source of moral cognition can be traced back to the typical work between philosophers David Hume and Immanuel Kant. Kant felt that morality is nothing more than rationality. Hume, on the other hand, concluded that desire rather than reason govern human behavior, stating that reason is a slave to the passion and need to serve and obey them:

*Actions do not derive their merit from conformity to reason, not their blame from a contrariety to it. … Reason can never immediately prevent or produce any action by contradicting or approving of it, it cannot be the source of moral good and evil...Reason is wholly inactive, and can never be the source of so active a principle as conscience, or a sense of morals.* (Hume, 2003; p 326)

Not popular in its time, Hume’s thinking stands the test of time and gets a warm response in modern time (Fodor, 2003). Rather than claiming that cognitive develop is the foundation of moral judgment, Hoffman argues that the essential part of moral development is the maturity of empathy (Hoffman, 1990; 2001). “Empathy” is defined as the ability to identify another’s emotions and understand what they are feeling. Hoffman suggests that empathy may play a significant role in a comprehensive moral theory. Without empathy, the cognitive ability in moral judgment is like stone-cold heart without hot blood. Similar to Kohlberg’s moral theory, Hoffman demonstrates how children’s empathy progress from four different levels. First level of empathy is called global empathy. At this stage, children may match their witnessed emotions
which are involuntary and undifferentiated. For example, the infant is crying when another infant is crying. At second level, children can actively offer help which would make them feel comfortable, and it is in this sense, conceptualized as egocentric empathy. With the emergence of role-taking skills (Selman, 1971), children recognize that other people’s feeling are different from their own. At this stage, children have developed the ability of empathy for another’s feelings. By the late childhood and early adolescence, with the development of abstract thinking, children become aware that others feelings may not only due to immediate experience but also spring from their life situation. At this level, children may show empathy to an entire group of people like the disadvantaged or the poor (Hoffman, 2001; Schaffer, 1996).

Haidt values and carries forward the views of Hume and Hoffman, and presents his social intuitionist model (SIM) as an alternative to cognitive development model. His model is an intuitionist model that stated that moral judgment is generally the result of quick, automatic evaluations (Haidt, 2001). This model emphasizes that people have nearly instantaneous perceptions of right or wrong that emerge without conscious consideration when faced with a moral situation. In his own studies, Haidt noticed a phenomenon called “moral dumb,” which means that subjects had gut feelings that some behaviors are morally wrong but felt hard to explain (Haidt, 2001; 2012). In moral scenarios such as “Sibling Incest,” subjects known immediately that incest is morally unacceptable but felt hard to find a justification. This phenomenon caused him to reevaluate traditional cognitive developmental model which proposed that moral judgment is caused by moral reasoning. He concluded that moral reasoning found in
Kohlberg and his followers’ research is usually a post hoc fabrication that created after a judgment has already reached. SIM is thought to be more consistent than rationalist models with recent findings in social, cultural, evolutionary, and biological psychology, as well as in anthropology and primatology (Haidt, 2001). In Haidt’s recently bestseller book *The Righteous Mind*, he portrayed that human mind is divided like a rider on an elephant, and the rider’s job is to serve the elephant. The elephant is intuition and the rider is reason. The elephant (automatic processes) rules despite, sometimes, it also listens to the rider (controlled reasoning) (Haidt, 2012). Haidt’s work reflects a struggle between emotional and cognitive processes in moral decision, and now the clock pendulum seems turning to the emotional part. Though Haidt stressed that intuition is not synonymous with emotional appraisal, it is common to regard that intuitive processing as an external representation of emotional appraisals of the moral situation. Increasing scholars have accepted the claim that an affective component process may play a role in moral cognition, and this process can be best understood as heuristic—rule of thumb that guide daily behavior (e.g., Sunstein, 2005). This heuristic process may be bias and not reliable in all situations, it helps us to form a general understanding about the world around us (Gilovich, Griffin, & Kahneman, 2002; Pugh, 1977). Gigerenzer and his colleagues, for example, suggest that heuristics are an adaptive behavior. They suggest that in the actual world in which we live, full of uncertainties and surprises, heuristics, are indispensable and often serve us well most of the time. “Simple heuristics exploit the information structure of the environment, and thus embody ecological rather than logical rationality” (Gigerenzer, Hertwig, & Pachur,
Moral Neuroscience

Brain imaging techniques, especially the Function MRI (fMRI) has helped researchers investigate the psychological and neurobiological processes underlying moral judgment in normal subjects as well as in studying subjects with brain damage that show particular deficits in moral behaviors. Greene and his group used fMRI and moral dilemmas to clarify the long-standing debate between moral reasoning and moral emotion (Greene, Sommerville, Nystrom, Darley, & Cohen, 2001). The using of philosophical term “utilitarian/deontological” in his work reflects Greene’s profoundly philosophical background. Greene is interested in “what makes it morally acceptable to sacrifice one life to save five in the trolley dilemma but not in the footbridge dilemma?” These two dilemmas are retrieved from philosopher Thomson (1986). The Trolley dilemma is like below:

_A runaway trolley is headed for five people who will be killed if it proceeds on its present course. The only way to save them is to hit a switch that will turn the trolley onto an alternate set of tracks where it will kill one person instead of five._ (Thomson, 1986)

_Ought you to turn the trolley in order to save five people at the expense of one?_

The structure of footbridge dilemma is similar to the trolley dilemma with minor difference. The footbridge dilemma is listed below:

_A runaway trolley is heading down the tracks toward five workmen who
will be killed if the trolley proceeds on its present course. You are on a footbridge over the tracks, in between the approaching trolley and the five workmen. Next to you on this footbridge is a stranger who happens to be very large.

_The only way to save the lives of the five workmen is to push this stranger off the bridge and onto the tracks below where his large body will stop the trolley. The stranger will die if you do this, but the five workmen will be saved._

_Is it appropriate for you to push the stranger on to the tracks in order to save the five workmen? (Thomson, 1986)_

Greene suggested that the former is an impersonal dilemma while the latter is a personal dilemma. The distinct nature of these two dilemmas partially explains why people act differently to them. He used three criteria to capture the difference between the personal moral dilemma (as the footbridge dilemma) and impersonal dilemma (as the trolley dilemma). In personal moral dilemma, first, the violation must be likely to cause serious bodily harm. Second, this harm must befall a particular person or set of persons. Third, the harm must not result from the deflection of an existing threat onto a different party (Greene, Nystrom, Engell, Darley, & Cohen, 2004; Greene, 2009). Compared to the impersonal dilemma, moral choice in the personal dilemma selectively involved brain activation in emotional processing areas. Angular gyrus (Brodmann’s Area 39), posterior cingulate gyrus (BA 31), and medial frontal gyrus (BA 9 and 10) which were well-known to be involved in emotional processing were significantly more active in personal dilemma. Reaction time, which is a psychological
index of processing speed, was longer when subjects response in personal dilemma than when in the impersonal dilemma. This result reflected that subjects confronted more conflict and struggle in personal dilemma between emotional process and rational process than in the impersonal one. In a consequent study, Greece and his group manipulated subjects’ cognitive load, and found that this manipulation selectively increased the time that it took for subjects to make utilitarian judgment but not non-utilitarian judgment (Greene, Morelli, Lowenberg, Nystrom, & Cohen, 2008). This interference effect provides direct evidence for the influence of controlled cognitive processes in utilitarian moral judgment. This result is similar to a clinic finding that damage to ventromedial prefrontal cortex (VMPC), a brain region necessary for the generation of social emotions, produced an abnormally “utilitarian” pattern of judgments (Koenigs et al., 2007). Interestingly, in Greene’s study, the cognitive load manipulation did not change the possibility that subjects would make utilitarian decision, but only the length of time that need to reach the decision. This phenomenon implied that subjects made the decision quickly and then took time to process and justified it. This post hoc reasoning of moral decision is keeping with Haidt’s theory. Greene’s groundbreaking research extends the understanding of morality from neuroscience perspective. Research of neurobiological processes underlying moral judgment has been the focus of many recent empirical studies (Moll, Zahn, de Oliveira-Souza, Krueger, & Grafman, 2005). Depends on the task requirement, researchers found different areas of brain activated in moral decision (Greene & Haidt, 2002; Moll et al., 2005).
Dual-Process Model

Based on systematic research in morality, Greene suggests a synthesis of “dual-process” theory that claims that both automatic emotional responses and more controlled cognitive responses play crucial and, in some cases, mutually competitive roles in moral decision (Greene et al., 2008; Rand, Greene, & Nowak, 2012). The emotional processes are related to deontological decision, while the controlled cognitive responses usually lead to utilitarian judgment (Greene, 2007). Dual-process theories come with many different flavors, but generally they assume that both intuition and reflection interact to produce decision (e.g., Epstein, 2003; Evans, 2003; Kahneman, 2003; Sloman, 1996). Let’s have a brief review on Epstein and Kahneman’s theories as examples.

Philosopher S. Epstein suggested that we had two relatively independent value systems (Epstein, 1991; Epstein, 2003). His understanding of values was that:

*Values exist at two levels, a conscious, verbal level and a preconscious, experiential level. The values at the two levels can differ in content and degree, as they are embedded within different rules. This does not mean that the two systems never correspond, and when they do not, self-reported values are often poor predictors of emotion and behavior.* (Epstein, 1991, p 13)

Epstein argued that the first is a rational conceptual system in which our values are expressed as conscious beliefs about the relative desirability of outcomes, along with associated attitudes. This relatively rational, analytic system tends to be motivated by a need for empirical and logical confirmation. Reese and Fremouw (1984) referred to
these as “normative or prescriptive values”—what ought to be—and Argyris and Schön (1978) referred to them similarly as espoused values. The second is an experiential system that is tied more closely to preconscious, emotional, and affective processes. Consequently, these are experienced as more automatic and are more action oriented. These have also been characterized as normal values or as values in use (Argyris & Schön, 1978; Reese & Fremouw, 1984). All of these scholars viewed these two value sets as overlapping, not discrete. That is, rational, espoused, and normative values may also be expressed in normal or customary behavior. Nevertheless, the distinction between the two components is important both theoretically and practically. Epstein’s interpretation of dual value systems has got a warm response from psychologists and developed to a theory named cognitive-experiential self-theory (CEST). According to CEST, the experiential system, which has a much longer evolutionary history than the rational system, represents events in the form of concrete exemplars rather than abstract symbols, is shaped by emotionally significant past experience, is outcome-oriented rather than process-oriented, and operates automatically outside of or at the fringes of conscious awareness (Epstein, 2003). CEST provides researcher a testable framework for empirical research in social psychology and personality (Kirkpatrick & Epstein, 1992; Kozhevnikov, 2007; Pacini, Muir, & Epstein, 1998; Simon et al., 1997; Skarlicki & Rupp, 2010; Sladek, Bond, & Phillips, 2010). In fact, Epstein’s two relatively independent value systems are nothing new in history, if we are familiar with Freud’s psychoanalysis (Freud, 1949). The division of mental life into conscious and unconscious is the fundamental premise on which psychoanalysis is based. Freud
assumed that the unconscious and conscious map directly onto the Id and the ego, respectively.

Drawing on decades of research in psychology that resulted in a Nobel Prize in Economic Sciences, Daniel Kahneman won his Nobel Prize by the research that maps bounded rationality (Kahneman, 2003; 2011; Simon, 1982). Kahneman provides robust evidence to demonstrate that:

*There are two generic modes of cognitive function: an intuitive mode in which judgments and decisions are made automatically and rapidly and a controlled mode, which is deliberate and slower* (Kahneman, 2003; Sloman, 1996).

The intuitive mode is also called System 1 of cognitive processes, whereas the controlled or reasoning mode is called System 2 (Stanovich & West, 2000). The first system tends to response basing on prior knowledge and beliefs and usually to be fast, intuitive, heuristic and automatic and emotional, whereas the second system allows reasoning according to logical standards and is assumed to be slow, reflective, controlled and the operations of the second system requires more intellectual effort (Evans, 2003; Haidt, 2001; Kahneman, 2003). Details of features of the dual-process model can be found in appendix 1. Dual-process model is now widely accepted in social and cognitive psychology as well as applied in moral judgment. The present dissertation will fit in this framework and provide more data to test the validity of this model.
Moral Judgment, Moral Identity, and Everyday Moral Behavior

One of the ultimate purposes of studying moral judgment and moral identity is to predict moral behavior. The primary purpose of this dissertation is using realistic moral stimuli to investigate the nuances of moral judgment and moral identity in people’s daily life.

Measuring Moral Judgment as Ethical Predispositions

Traditional moral psychologists such as Piaget and Kohlberg underline the importance role of moral reasoning and make an implicit claim that cognitive sophistication is the foundation of moral behavior. (Kohlberg, 1969; Piaget, 1932). However, if we exam this approach within the framework of dual-process model, obviously this cognitive developmental model focuses narrowly on the reflective process and has ignored the intuitive process when making moral decision. As Haidt’s SIM states that moral judgments is generally the results of quick, automatic evaluations. “I feel it is wrong, so it is morally wrong”. Rather than dedicated, reflective reasoning, this simple and heuristic thinking is more consistent with findings in social, cultural, evolutionary, and biological psychology, as well as in anthropology and primatology (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 predispositions (Brady & Wheeler, 1996; Reynolds & Ceranic, 2007). Ethical predispositions or moral predispositions refer to the moral frameworks individuals rely on when facing moral decisions (Brady & Wheeler, 1996). Research in this area has
focused on two most foundational moral frameworks in terms of consequentialism and formalism, as well as in related constructs of utilitarianism and deontology (Bartels & Pizarro, 2011; Brady & Wheeler, 1996; Schminke & Wells, 1999). Distinction between consequentialism and formalism reflects the long-standing debate between utilitarianism and deontology since 200 years ago in moral philosophy. In history, consequentialism is usually referred to as utilitarianism, which focuses on the ends of an act, and claims that the moral act is that which maximizes the good or benefit (Bentham & Mill, 1973). In contrast, formalism represents a deontological or an obligation-based approach which emphasizes the importance of patterns, rules, and formal standards to determine moral behavior (Kant, 2002). Previous research has demonstrated that a manager’s preferences for consequentialism or 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 & Wheeler, 1996). Ethical deontologists were more sensitive to procedural justice issues, and ethical utilitarianism adherents were more sensitive to distributive justice issues (Schminke, Ambrose, & Noel, 1997). In addition, ethical deontologists and utilitarianism adherents usually have different moral decision processes. As in Greene’s dual-process model, the emotional processes are related to deontological decision, while the controlled cognitive responses usually lead to utilitarian judgment (Greene, 2007). Since ethical predispositions are more relevant to exam the neurological basis of moral judgment, this research will also measure individuals’ moral judgment as ethical predispositions rather than their cognitive
developmental stages.

Moral Identity as a Bridge to Moral Judgment and Moral Behavior

Though scholars still support the consensus that moral judgment is a fundamental component of moral functioning, empirical research shows that moral cognition alone plays a relatively modest role in explaining the variability in moral action (e.g., Blasi, 1980). Increasing researchers have recognized the limitations of the cognitive development theory (Haidt, 2001; Krebs & Denton, 2005), and several of them have turned to the identity theory (Aquino & Reed, 2002; Aquino, Freeman, Reed II, Lim, & Felps, 2009; Blasi, 1980; 2004; Shao, Aquino, & Freeman, 2008). They suggested that moral behavior is the result of both moral judgment and moral identity, and moral identity is a promising variable to bridge the gap between moral judgment and moral behavior (Blasi, 1980; 2004; Damon & Hart, 1992; Hardy & Carlo, 2005; Lapsley & Narvaez, 2004).

The conceptualization of identity comes from Erikson’s theory. Erikson proposed that identity is rooted in the very core of one’s being, which involves being true to oneself in action, and is associated with respect to one’s understanding of reality (Erikson, 1980; 1994). In a recent study, Strohminger and Nichols demonstrate in a series of studies that morality constitutes the largest part of self. It is your sense of right and wrong makes you you, not me (Strohminger & Nichols, 2014). Corpus of autobiographical memories and purely physical traits are fairly important. However, the moral traits are considered the most essential part of identity, the self, as well as the soul.
Blasi (1980) may be the one of the first scholars who introduced identity into moral functioning. He emphasized three major components of moral functioning. The first component, moral identity, focuses on the significance and salience of moral values in one’s self-identity. For some individuals, moral considerations are abundant in everyday living because morality is rooted at the core of their being; whereas for other people, moral standards and values are not that particularly salient in their daily activities and self-concept. The second component refers to individuals’ sense of personal responsibility for moral action. This component resembles Rest’s called moral intention, and the moral agent needs to establish moral concern ahead of other concerns (Rest & Barnett, 1986). The third component is self-consistency. In Blasi’s conceptualization, a fundamental motive in personality functioning is psychological self-consistency, a motive that can only be satisfied by congruence between judgment and action. It is this sense of the self’s integrity that at stake in moral action (Blasi, 1984). Erikson’s view of identity is also the foundation of the definition of moral identity by Hart et al. as “a commitment to one’s sense of self to lines of action that promote or protect the welfare of others” (Hart, Atkins, & Ford, 1998). Scholars in the area of developmental models of self-identity, like Blasi, have suggested that moral identity functions as the ideal principle of action (Blasi, 1984). The primacy of moral identity in motivating moral conduct was more strongly asserted by Damon and Hart who stated that

There are both theoretical and empirical reasons to believe that the centrality of morality to self may be the single most powerful determiner of
concordance between moral judgment and conduct. People whose self-concept is organized around their moral beliefs are highly likely to translate those beliefs into action consistently throughout their lives. (Damon & Hart, 1992).

**Honest Behavior—A Typical Everyday Moral Behavior**

Honesty is focused on in this dissertation because previous research showed that honesty is one of the traits that people most frequently use to define moral character (Aquino & 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 daily 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, Schacht, Holt, & Turner, 1993). Surveys showed that thousands of high school students admitted lying to their parents and teachers (Ma, Wan, & Lu, 2008). High valued but frequently abandoned, this irony property of honesty makes it as an ideal representative of everyday moral behavior.

Some scholars who advocated bioethics viewed the honesty through the lens of evolutionary theory as an adaptive advantage (McGuire & Troisi, 1990). According to Darwin’s comment, deception is often an important part of natural selection (Darwin, 1859; Darwin & Ghiselin, 1981). Human ancestors were not the biggest or strongest species on the planet, and they had to use their wits and worked efficiently and effectively as a team in order to survive. Working effectively as a team meant building a
social system based on trust, honesty, reliability, and mutual aid. This process is what world-renowned anthropologist Richard Leaky and his colleague called “reciprocal altruism” (Leaky & Lewin, 1978). Though this form of social organization helped our human ancestors survived, it was easy to figure out how it would be tempting for individuals who wanted to take advantage of this process for their personal gain. Outwitting one’s competitors to ensure survival often meant using one’s ability to mislead or deceive. This means that, as Leaky and Lewin (1978) argued, individuals may produce sham behaviors to take more than what they deserved during the course of natural selection. Nature tends to favor those who practice deception effectively as well as those who become effective perceiver.

In this sense, the traits of deception and perception are both adaptive and useful in natural often fierce competition for survival, acquiring food and other resources and reproducing (Knapp, 2008). The perspective of bioethics seems to provide us with robust evidence to explain the ubiquitous nature of lying and deception in our society. However, just because natural selection may favor a system that reward lying and deception does not mean nature is not interested in truthfulness, honesty, and candor. The irony is that to reap the benefits of lying and deception, it has to be performed within a social system that values and expects honesty (Knapp, 2008). What is more, our modern society is based to a much larger extent than is usually realized upon the faith in the honesty of the other (Simmel & Wolff, 1950).

*Examples are our economy, which becomes more and more a credit economy, or our science, in which most scholars must use innumerable*
results of other scientists which they cannot examine. We base our gravest
decisions on a complex system of conceptions, most of which presuppose the
confidence that we will not be betrayed. Under modern conditions, the lie,
therefore, becomes something much more devastating than it was earlier,
something which questions the very foundations of our life. (Simmel & Wolff,
1950, p 155)

If we admit the fact that millions and millions of years later we live in a world
where many believe it is fine to deceive in order to survive, while simultaneously trying
to maintain a society highly based on honesty and trust, it triggers the need for more
elaborately investigating of honest behavior and more effectively curbing measures.

Different Perspectives on Honesty

Philosophers in both the West and the East have given their understanding of
honesty. In Chinese language, honesty or credit seems the same thing. According to
Annotation of Explaining Article and Interpreting Words (《說文解字》), “To be honest,
means to have credit, and to have credit also means to be honest” (Xu, 2010). According to Xu's definition, being honest, in conjunction with having credit, means no false, no self-deception, no deceptive, and practice what one preaches. The traditional Chinese concept of honesty has three different levels. The first level, to be honest means to commit to the words, Confucius said: “With friends, you have to keep your promise.” (Confucian Analects Book I: Hsio R” ⁴). Words include both spoken and written language, but language does not always express one’s true idea, and we cannot

⁴ Retrieved the translation from :
limit our behavior to what we have said. This concern leads to the second level of being honest: committing to one’s own heart. At this level, one does what he or she truly believes and do not be self-deceptive. It does not matter whether you have expressed your thoughts publicly. You need to be honest to your true meaning in heart. Records of the Grand Historian (《史記》) recorded a story (Sima & Watson, 1961):

"King of Xu was very fond of Jizhi’s good sword, but he felt embarrassed to say it. Jizhi knew about it, however, he was on his duty to visit another country, he could not offer his sword to Xu at that moment. When Jizhi had finished his task and came back to Xu, the king was dead. Jizhi left his sword and tied it to a tree in front the graveyard of Xu. Retinue of Jizhi was confused with his behavior, and asked Jizhi: “Jun Xu is dead, yet who to please?” Jizhi said: “you are not right, my heart has made the promise, and how can I betray my heart just because Xu has dead?”(Shiji • House of Wu Taibo)

In this story, Jizhi has made no verbal or written commitment to offer his sword, but just provided his promise in mind. Because of this acquiescence, Jizhi intentionally came back and kept his promise, no matter whether the king was alive or dead. At this second level, to be honest means to commit to the agreement of heart, agreement from conscience, not just the spoken words or written contract. Neither the second level honest nor the first level honest has answered the question whether this agreement is right or wrong. From Confucius’ view, to be honest is not the highest moral principle, and this rule is subordinated to act according to the “Tao (道)”, so the top level of being honest means committing to the “Tao”. Committing to the “Tao” means to be loyal to
your own nature and existence, so that you can behave properly to your social role and shoulder your due obligations. Confucius said:

⋯ In our part of the country, those who are upright are different from this.
The father conceals the misconduct of the son, and the son conceals the misconduct of the father. Uprightness is to be found in this. (Confucian Analects Book XIII: Tsze-Lû)

Filial piety is the first priority value of Confucian ethics. To bear the obligations between father and son is more important than being honest and telling the truth. In this story, being honest and telling the truth bow to a higher level regulation of filial piety. When being honest conflicts with filial piety, Confucius suggested one should follow the Way of Humanity (人道) instead of not stealing (Hwang, 1999).

*Figure 1: Western and Eastern view about morality (including honesty)*

<table>
<thead>
<tr>
<th>Chinese</th>
<th>Western</th>
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<tbody>
<tr>
<td><strong>Socio-biological approach</strong></td>
<td>Contractual approach</td>
</tr>
<tr>
<td><strong>Affective and emotional</strong></td>
<td>Rational</td>
</tr>
<tr>
<td><strong>Moral issue</strong></td>
<td>Legal issue</td>
</tr>
<tr>
<td><strong>Inside Conscience</strong></td>
<td>Outside legal system</td>
</tr>
</tbody>
</table>

(The Edited by the researcher)

The Western concept of honesty can be traced back to the Jewish tradition. “Not to commit perjury”, as an important moral precept, is included in “Ten Commandments of Moses”. According to Bok’s statement (1999), St. Augustine (345-430), St. Thomas Aquinas (1225-1274), John Wesley (1703-1791), and Immanuel Kant (1724-1804) all
have advocated unyielding stand against dishonesty, and they believed that it was never right to lie. With the early development of commerce and trade in the Western world, contract has been widely used in social lives as both a business tool and a principle of interpersonal communication. Therefore, the Western concept of honesty has a characteristic of a contractual nature, like what we can see throughout the classic work *The Social Contract* written by Rousseau (Rousseau, 1950). Being honest is built on the foundation of mutual commitment, mutual trust, and basically means to respect the fact and to keep promises.

As what have been analyzed above, philosophers in Eastern and Western world are divided into the following areas when referring to moral (including honesty, see in Figure 1): (1) Traditional Chinese concept of honesty is based on a genetic basis for the close relatives and friends (socio-biological approach), this kind of honesty is limited to in-group people while the Western honesty is built on contract and have a more broader applicability (Chen & Wang, 2003; Lu, 2003). (2) Traditional Chinese honesty is related with affection and emotion while the Western view of honesty is related with rational decision (Lu, 2003). (3) In China, being honest is more or less a moral issue and is more likely a self-discipline, while in the West, being honest is rather a legal issue (Mu, 2008). (4) Traditional Chinese depends on the inner human conscience to regulate people’s honest behavior, while the Westerners depend on an outside legal system and mechanism to guarantee it (Mu, 2008).

The differences between Western and Eastern views indicate that when investigating honesty in the Eastern context, we should treat the Western psychological
moral theories cautiously, since these theories come from distinct philosophical tradition. More importantly, because Chinese people conceive honesty of a social-biological approach, and engage more affection and emotion in honest decision, suitable model for Chinese people’s behavior should pay more attention to emotional factors and interpersonal issues (Hwang, 2000).

**Definition of Honest Behavior**

In attempting to study honesty and dishonesty scientifically, one cannot avoid making assumption about what it means to be honest or dishonest, despite that these terms are not precisely defined in ordinary discourse.

In our daily discourse, the terms “honesty” and “dishonesty” are used broadly. In this board sense, whether a person is honest or dishonest partly is a function of whether he keeps his promises and refrains from stealing and bribery. Honesty is generally regarded as a cardinal virtue, and referring to someone as a “dishonest person” is usually a severe criticism or condemnation of that person. On the other hand, some argue that because lying and deception are so universal in our life and are frequently justified in certain spheres of life/activity (e.g. to protect a privacy or avoid conflicts in close personal relationships), honesty is not a virtue in those spheres of life/activity (Bok, 1999). Lying can even be a part of culture. For example, telling children that Santa Claus is real may be the first lie that parents tell them in the Western culture. However, this lie colors children’s life and helps them to begin believing in a world beyond their eyes.

In the research literature, “honesty” is termed as integrity or credit (particularly in
personnel selection field), or is termed as not lying or not deception (Bok, 1999; Butler & Cantrell, 1984; Sip, Roepstorff, McGregor, & Frith, 2008). Some researchers defined honesty and integrity as synonyms. For example, Butler and Cantrell defined integrity as the reputation for truthfulness and honesty of the trusted person (Butler & Cantrell, 1984). But other scholars, such as Becker, separated honesty from integrity and defined integrity as loyalty to rational principles and values (Becker, 1998). Carson argued that the terms “honesty” and “dishonesty” only have to do with lying, deception, withholding information, and the like. In his definition, honesty means having a strong principled disinclination to tell lies or deceive other (Carson, 2010). In Chinese culture, the meaning of honesty is more complex. University students in Mainland China viewed honesty to be a concept that contains six factors: fair-minded, no cheating, trust, recognition of a promise, keeping one’s word, and credit (Gui, 2004; Yang, 2007). Liu and Li investigated middle school students' view of honesty, and found that students viewed honesty as integrity and keeping promise (Liu & Li, 2007). Chinese scholars (including Hong Kong and Taiwan) who are interested in honesty mainly focus on the following field: (1) the development of concept of lying/deception (Xu & Bao, 2000; Xu, Wang, & Zhang, 2005), (2) children’s moral judgment about lying within different contexts (Xu, Jin, Liu, & Bao, 2002; Xu et al., 2005), (3) features of lying in some special groups, such as children, teenage, and those people chatted online (Cai, 2003; Lu, 2004; Shi, 1986), and (4) the lie detector technology and the influence factors of the polygraph (Cui et al., 2009; Guo & Su, 2000; Hu & Fu, 2009; Wu, 2002). These studies provide some insightful results, however, first, merely analyze people’s concept of
honesty can’t well explain their actual behaviors; second, only investigate children or adolescents contributes little to our full understanding why so many normal adults as us are involved in dishonest behavior; and third, there is little empirical research to inspect antecedent factors that influence people’s (dis) honest behavior yet.

Nyberg believed that deception was so omnipresent because it was part and parcel of the way that we conducted our everyday affairs; it was an inherent part of the way that we communicated (Nyberg, 1993). Imaging scenarios such as you telling someone that you feel fine when you do not, or you telling someone “It is a perfect gift and I love it” when it is not and you do not, in such situations, the lies that you told do not have serious consequences and are even part of everyday conversation. People consider this kind of lies and deception as “low-stake lies” or sometimes “white lies” because there is not much to be gained by successfully lying and there isn’t much to be lost if the lies are unsuccessful. “Low-stake lies” occur in a variety of situations, such as in self-presentation, in efforts to attract a romantic partner, in flattery and ingratiation etc. The differences between behaviors of this kind of dishonesty and honesty are barely discernable, if at all. They involve little stress, little emotion, and the benefit involved is minimal.

*Ordinary people are so practiced, so proficient, and so emotionally unfazed by the telling of untruths that they can be regarded as professional liars.* (DePaulo et al., 2003)

The existence of “low-stake lies” makes the definition of honesty complicated, and obviously, this kind of behavior is not our focus of concern. After scanning
diversified definitions on honesty above, when defining the concept of honesty, one needs to keep the following three principles in mind: firstly, honesty reflects in bilateral relations, and should be expressed on behavior, viewing it as an entirely intra psychic affair helps little to this research. Secondly, “low-stake lies” and “while lies” are so common in our life but account less for our understanding of the great moral slump and honesty deficiency in our economy and government, we need to focus on those “high-stake lies” and exclude “low-stake lies” from the definition. Thirdly, to a certain degree, we are all moral relativists who tell lies sometimes, in this case, rather than study honesty as a stable personality trait that tends to be situation-independent, we concentrate on contextualized honest behavior that is situation-dependent.

For this purpose, we follow Greene’s way and take a behaviorism perspective and define dishonesty in a negative and totally behavioral way (Gino, Schweitzer, Mead, & Ariely, 2011; Greene, 2009):

*In the presence of interests, one’s behavior that intentionally betrays rules, and expects to benefit from it.*

This definition indicates three important factors: (1) the situation must involve interests conflict, this factor excludes the low-stake lies or white lies out of the definition; (2) the agent involved intentionally betrays rules, no matter whether the rules are unwritten or overt, this factor makes the definition possesses a characteristic of contractual sense; and (3) the agent expected that his/her false behavior would be believed and then get personal gain, this factor means someone may suffer from this dishonest behavior. There may be some virtues behind restraining from betraying rules
to get benefit. But the present research focuses on the visible behavior only. It is the fact that a gentleman may less engage in stealing behavior and a thief is more possible to conduct stealing. However, this research is only interested in the “stealing behavior”, and not tries to ascribe this behavior to a gentleman or a thief. This narrow sense and behaviorism definition gets rid of investigating the complicated structure of honesty and facilitates our study without the burden of investigating low-stake lies and deceptions. This minimal, behavioral conception of honesty does not involve ascribing noble motivations to these individuals. When referring someone as honest, this research is claiming only that he or she chose not to behave dishonestly this time. Are the “dishonest” people really dishonest? These individuals intentionally violated the rules of the game, to which they had agreed at first moment, and gained money as a result.

It is worthwhile to emphasize again that in labeling subjects as dishonest people in this research, the main purpose is to describe their present behavior only and not ascribing this behavior to their stable personality traits.

A Social Cognitive Perspective on Moral Identity

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 life 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 & 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 & 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 & Narvaez, 2004; Narvaez, Lapsley, Hagele, & Lasky, 2006; Shao, et al, 2008).

**Social Cognitive Perspective on Moral Identity**

The social cognitive perspective defines moral identity as the cognitive schemas, moral values, goals, traits, or behavior scripts that a person holds about his or her moral character (Aquino & Reed, 2002; Aquino et al., 2009; Lapsley & Narvaez, 2004). Moral traits are embedded in the memory of individuals and are linked to the concept of “moral” in an individual’s mental representations of self. 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 an individual to act morally (Damon & Hart, 1992). This approach adopts knowledge accessibility as the mechanism to explain its role in moral functioning. Accessibility reflects the quality of being at hand when a cognitive schema is needed. If a given schema has high accessibility, it should exert a strong influence on behavior (Higgins, 1996; Higgins & Brendl, 1995). They referenced Erikson’s identity theory and suggested that, to the extent individual adopts and/or aspires to moral traits the individual is driven to act in a way that is consistent with these traits (Erikson, 1994). Aquino and Reed (2002) claimed that this definition
capitalizes on the psychological phenomenon of Anderson’s spreading activation theory. Spreading activation theory suggests that concepts interconnects like the nodes in a network, activating one concept would spread out energies in the network and activate related concepts (Anderson, 1983). Rather than discovering the entire traits that might compose a person’s unique moral identity, Aquino and Reed argued that tapping certain trait stimuli can invoke a broader associative network of connected traits. Guided by this principle, Aquino and Reed (2002) have developed their scale of moral identity based on the social cognitive theory that underpins the concept of moral identity. They invited 228 undergraduate business students to think of personal traits, characteristics, or qualities that a moral person possesses and selected nine traits as identity-invoking stimuli. The traits listed are: caring, compassionate, fair, friendly, generous, helpful, hardworking, honest, and kind. Based on these nine moral traits, Aquino and Reed identified two dimensions of moral identity namely: internalization and symbolization. This identification focuses on two related dimensions of identity: the private and the public dimensions of the identity (Aquino & Reed, 2002). Internalization taps the extent of which the traits are crucial to the self-concept (the private dimension), and symbolization refers to the extent of which the traits are reflected in the respondent’s action in the world (the public dimension). Private and public dimensions are well-established standpoints about identity supported by many other scholars (e.g., Côté, 1996). Aquino and Reed (2002) provided an easy-administered instrument to measure moral identity, thereafter, the field has made a great progress. Research demonstrated that these two dimensions of moral identity effectively predict several
moral behaviors, including self-reported volunteering and the willingness to minimize harm toward out-group, and cheating behavior (e.g., Aquino & Reed, 2002; Gino et al., 2011; Reed & Aquino, 2003).

People in different cultures have strikingly different representations of self. Comparing with many Western cultures that see themselves as separate from others, Asian cultures view themselves as connected with others (Hwang, 2000; Kashima et al., 1995; Markus & Kitayama, 1991; Yang, 1988). These different views of self are liable to influence many individual experiences, including which moral values, moral traits that they cherished. Both the theory and instrument of moral identity were developed in Western culture. We cannot arbitrarily make an assumption that moral identity in a relatively different culture would be the same.

**Moral Identity in Chinese Context**

The study of self has a long history in philosophy and psychology. When addressing the possible difference of self in different kinds of social environments, scholars, such as Triandis (1989) and Hwang (1999; 2000), usually take a “system” approach to do a comprehensive analysis between different cultures. Three aspects of the self (private, public, collective) with different probabilities in different kinds of social environments are usually discussed in literature (e.g., Hui & Triandis, 1986; Markus & Kitayama, 1991; Triandis, 1995). Some dimensions of cultural variations (such as individualism - collectivism, tightness - looseness, independent - interdependent) are discussed in relation to the sampling of these three aspects of the self (e.g., Markus & Kitayama, 1991; Triandis, 1989). Empirical investigations suggest
that these cultural variations have implications for social behaviors (e.g., see reviews in Markus & Kitayama, 1991; Triandis, 1989).

The present thesis, however, takes a “trait” approach to study cultural differences. “Culture and Personality” is a focus of psychology and anthropology for decades. It is suggested that culture has huge impact on personality, and people possess distinct personality traits in differing cultural contexts (Hofstede & McCrae, 2004; Wang, Cui, & Zhou, 2005). The current analysis focuses on how people in Chinese culture view themselves as a more person, and how this self-image affects their moral behavior. People in the individualistic culture hold an independent view of self while people in the collectivistic culture might hold an interdependent view of self (Markus & Kitayama, 1991). These distinct views of self affect the very nature of individual experience, including cognition, emotion, and morality (Hwang, 2000; Markus & Kitayama, 1991). Moral identity in the Eastern culture should be different from the one in the Western Culture. Given the large body of empirical evidence on moral identity, it seems clear that moral identity is a promising concept that helps bridge the judgment-action gap. Aquino and Reed’s (2002) study indicates that defining moral identity from social cognitive perspective is a worthwhile approach and the two components of moral identity would be robust in Chinese context. However, moral traits selected in Western culture will not properly trigger a large pool of moral traits that people in China use to define a moral person. Aquino and Reed utilize an inductive process to select their identity-invoking stimuli in Western culture. They assigned relatively less importance of the moral traits stimuli, since the chosen traits might
trigger all the morality-related traits among people. However, as the “activation rules” suggests, the more importance the stimuli, the higher its activation potential and the stronger its ability to affect information processing and moral identity (Higgins, 1996; Higgins, Bargh, & Lombardi, 1985; Higgins & Brendl, 1995). According to Higgins and Brendl (1995), the “activation potential” refers to the extent to which a knowledge structure tends to be readily accessible for processing and acting on information. Though Aquino and Reed’s (2002) scale has demonstrated good predicative utility in Western context, there is room left to improve on the activation potential of those moral stimuli in Chinese context. Aquino and Reed selected the stimuli from inductive approach, and their list of moral traits perhaps missed some salient traits which were theoretically regarded as essential for being a moral person in Western culture. For example, their list did not include responsibility and respect. However, these two traits are highly regarded in Western culture if taking cognizance of the fact that in Educating for Character, Thomas Lickona emphasized responsibility and respect as the two mains characters that deserve for moral education (Lickona, 2009). One admits that some of their selected traits (e.g., fair, honest) are indispensable, but some of the traits (e.g., hardworking, generous) may not be essential for being a moral person considered in Chinese context (Hwang, 1999; Li & Yang, 1988). In Aquino and Reed’s own research, participants only considered hardworking and generous slightly above the midpoint of the 5-point Likert-scale. Furthermore, investigating moral identity in Chinese context needs to map onto Chinese people’s perspective of being a moral person. A constellation of moral stimuli from Western culture may not function
properly in the Chinese context. Hence, it is necessary to choose some moral traits that have higher activation potential and are readily accessible for processing as moral stimuli in the Chinese context.

Based on Gilligan’s work (1977, 1988), Callahan (1990) divided moral issues into two different categories, one bases on rule and justice while the other often involves concerns for interpersonal needs and emotional nurturance. The researcher suggests that since Chinese people have an interdependent view of self, compared with their Western correspondent, they care more about relationships with others, so the stimuli with social concern meaning would have the highest activation potential of their moral identity. As Ma (1988) suggested, in contrast to the Western morality emphasis on autonomy, separation, and individualism, Confucian moral development is a group or social concerned emphasis. The major concept of Confucian morality is rooted in the deep affection for kin and extends the primary group to all men (Hwang, 2000; 2001). Ma (1988) suggested that integrating affective and cognitive orientations would better fit Chinese moral development. Owing to the fact that affective orientation has an immense impact on Chinese moral judgment, it is possible that Chinese people highlight some different traits so that traits selected from Western sample would not well suit in Chinese context. For example, filial piety was anointed as an extremely necessary trait as being a moral person (Hwang, 1999). “Hundred good filial first”, in a society where filial duty is considered as sacred, it is reasonable to expect that that finial piety may have the highest activation potential when Chinese people need to define a moral person. The culture difference indicates that we cannot employ Aquino and
Reed’s instrument directly to measure people’s moral identity in a distinct context with diverse culture. Actually, some scholars, such as Wan and Yang (2008), tried to use these nine traits as moral stimuli to assess Chinese moral identity. However, they did not get very satisfied results. The original ten items from Aquino and Reed’s scale did not lead to a good fit value of model and they solved the problem by adding other new 12 items to increase the psychometrical property of instrument. They suggested that further research should consider the culture factor when measuring moral identity in Chinese context (Wan & Yang, 2008). Yang and Wan (2009) used directly Aquino and Reed’s moral stimuli and question items to measure Chinese moral identity, Cronbach’s \( \alpha \) was .64 for the scale. Comparing Cronbach’s \( \alpha \) to the result in Aquino and Reed’s work which has .73 and .82, the internal consistency was relatively low in Chinese context. One possible explanation is that Chinese people do not cherish the some moral traits, as well as they do not express themselves in the same way as the Western people, so that scale did not have high internal consistency. This fact indicates that indigenous research of moral identity is a necessity. Since the tremendous distinction exists between the Eastern and Western cultures, we cannot impose directly Aquino and Reed’s scale to measure Chinese people’s moral identity.

**An Integrated Approach to Everyday Moral Behavior**

Literature shows that both moral judgment and moral identity affect moral behavior. But what is the psychosocial mechanism behind our daily moral behavior? How would moral identity and moral judgment act together to shape moral behavior?
Cognitive Basis of Everyday Moral Behavior

Imagine that you are facing a loophole of financing management, and you know that you can take money back home without any trace. Do you actively use your willpower to resist the temptation to pilfer or do you regard honesty as natural and unconsciously choose to be honest? In other words, is intuitive (automatic) process or reflective (controlled) process leads to honest behavior?

The “moral will hypothesis” suggests that we use our moral will to control our behavior. As Bandura (2001) suggested, the capacity to exercise control over one’s life is the essence of humanness. Self-control, or willpower, is defined as the exertion of control over the self by the self (Muraven & Baumeister, 2000). In any action that needs self-control, the self inhibits its own natural responses rather than allowing them to operate in their automatic way. According to Bandura’s social cognitive theory, moral behavior is motivated and regulated mainly by the ongoing exercise of self-reactive influence (Bandura, 1991; 2001). Self-control enables individuals to resist short-term temptations (e.g., dishonest monetary gain) to achieve long-term aims (e.g., good reputation of an honest person) (Gino et al., 2011; Myrseth & Fishbach, 2009). Self-control is crucial to the distinction between automatic and controlled processes (Bargh & Chartrand, 1999; Bargh & Ferguson, 2000), and self-control mechanisms can be understood to be a large subset of controlled processes that do not operate unless activated (Muraven & Baumeister, 2000). Probably many individuals, if not all people, have the experience of consciously resisting temptation and choosing to be an honest person. According to Fishbach and Coverse, however, a stimulus is tempting only when considered in relation to another higher-order goal that an individual considers is more
valuable (Fishbach & Converse, 2010). Since the inner reward system exists, external reward, such as monetary gain, should not be considered as a temptation all the time. If your goal is money first, the monetary gain is certainly a temptation. If your aim is to be a decent person, however, the dishonest benefit is not necessarily considered a temptation. Think about the example of a man facing the financial loophole again. It is possible that an individual may rely on his/her willpower to achieve moral behavior. However, it seems unlikely (although not impossible) that an ordinary law-abiding citizen needs his or her willpower to resist the temptation to pilfer whenever he or she is facing murky mismanagement. Though there is an easy, dishonest gain, honesty is highly possible to occur in an automatic practice after thousands and tens of thousands of previous practices. This means that, after internalization and frequent practice, ordinary law-abiding people view honesty as the most natural choice and desire honest behavior unconsciously. One solid piece of evidence in line with this assertion comes from neuroscience and is focused on the respective roles of automatic and controlled processes in moral judgment (Greene & Paxton, 2009; McClure, Laibson, Loewenstein, & Cohen, 2004; Metcalfe & Mischel, 1999).

Another competing hypothesis, “moral grace hypothesis,” argues that in daily life, most of the time, people can achieve moral grace, and moral behavior is people’s unconscious behavior. Greene and Paxton (2009) demonstrated that honesty results from the absence of temptation and is determined by the presence of automatic processes. Greene and Paxton used intellectual procedures to investigate what happened in a person’s brain when they made the decision to lie. Participants were
asked to predict the outcomes of coin-flips for money, and they had a chance to gain money by lying about their accuracy. Both RT (Reaction Time) and fMRI data showed that, for people who typically behave honestly, they did not require any extra effort to resist the temptation. By contrast, the dishonest group exhibited increased activity in controlled processes when they refrained from doing so. Based on these results, Greene and Paxton concluded that their study demonstrated that honesty comes from the absence of temptation. If after individual socialization and social norms internalization, being honest usually comes from an intuitive process, and therefore, being honest takes less reaction time and be dishonest needs additional cognitive control and longer reaction time. Therefore,

_Hypothesis 1: Honest behavior comes from intuitive process rather than reflective process._

Aquino and his colleagues (2009) suggested that people had multifaceted self-concepts and that only a few can be the working self-concept at any given time. Their research also demonstrated how the situational factor increases or decreases the current accessibility to moral identity, and strengthens or weakens the motivation to act morally. Abundant evidence from cognitive and social psychology holds that a construct is accessible to the extent that it has been activated by recent use (e.g. (Higgins & Brendl, 1995; Hong, Morris, Chiu, & Benet-Martinez, 2000). Evidences from priming research lead to an assumption that whether a construct of moral comes to the mind of an actor depends on the extent to which the construct is highly accessible. It is possible to find a priming effect of moral construct on increasing ethical behavior
after a recent exposure (Aquino et al., 2009). This means that an external stimulus leads to high accessibility to moral concern and then more moral behavior unconsciously. Here comes the second hypothesis:

**Hypothesis 2**: Increasing accessibility to moral constructs leads to honest behavior automatically.

**Moral Identity and Moral Behavior**

According to the “dual-process” theory (Kahneman, 2003; 2011; Sloman, 1996), both automatic responses and controlled responses play roles in moral judgment, and utilitarian moral judgments are driven by controlled cognitive processes, while deontological judgments are driven by automatic emotional responses (Greene, 2007; 2009; Greene et al., 2008; Greene et al., 2004; Greene et al., 2001). Processing speed, which is usually represented by reaction time, is a widely used psychological feature that distinguishes deontological thinking (non-utilitarian thinking) from utilitarian thinking (Greene & 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. 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 & Ritov, 2009; Sunstein, 2005). Recently, however, Bartels and Pizarro found that those individuals who are least prone to moral errors also possess a set of psychological characteristics, such as having higher scores on measure of antisocial personality traits, which many would consider prototypically immoral (Bartels &
Pizarro, 2011). Though Bartels and Pizarro’s research has provided evidence to justification for deontological thinking in moral decision, the researcher argues 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 rarely confronted in daily life, especially in a 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. In this sense, knowledge from the existing research contributes relatively little to our understanding of the role of deontological thinking in business dilemmas. Heuristic, intuitive, and deontological thinking does not necessary lead to immoral behavior. For example, Rand, Greene, and Nowak (2012) found that cooperation is intuitive and fast because cooperative heuristics is 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. The assumption that honesty comes from the absence of temptation somehow conflicts with our common sense since we see ubiquitously dishonest behavior in our daily life, and we have the feelings that people consciously decide to be moral people. Perhaps the reason Green and Paxton’s findings supported intuitive process is that they described honest behavior of “honest individuals” rather than honest behavior of “dishonest individuals” who successfully refrain from cheating. For the “honest individual,” their moral schemas were easily
activated and accessed. 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). Therefore they demonstrated honesty automatically.

*Hypothesis 3: For individuals with a strong moral identity, honest behavior is more from intuitive process than reflective process.*

*Hypothesis 4: For individuals with a weak identity, honest behavior is more from reflective process than intuitive process.*

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. 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 cheating, corruption, tax evasion, or manipulation of account. This distinct class of moral tension, which is particularly present in daily life, 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?

Moral identity is one factor that helps us to know how deontology can lead to moral behavior. Moral identity represents a relatively well-defined, clear, easily accessible schemas or ethical predisposition that can be used quick, automatically in making decisions. 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). 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 or values 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 loss to reach the rule: “To seek the greatest good for the greatest number.” It is proposed 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.

_Hypothesis 5: People with strong moral identity have a preference for deontology when making moral decisions._
As Brady and Wheeler (Brady & Wheeler, 1996) found, utilitarianism and deontology are not alternates but, rather, independent sub-dimensions. Individuals with a 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 weak 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. 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. They 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. Deontologists are fast heuristic moral decision makers, but if they also have strong moral identity so that moral schemas are easily accessible and activated, they are presumed to have more motivation to place moral concerns ahead of other concerns and act morally (Reynolds, 2008).

**Integrate Moral Judgment and Moral Identity to Explain Moral Behavior**

Honesty is emphasized in the dissertation because previous research showed that honesty is one of the traits that honored both in Eastern and Western culture (Li & Yang, 1988; Aquino & Reed, 2002). On the other hand, it is almost impossible to ignore the
fact that dishonest behaviors of various types happen every day in our lives. 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 harmless activity with potential 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 & Ceranic, 2007). It is reasonable to expect that deontologists, 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.

Hypothesis 6: 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.

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 that will be addressed in this dissertation. First, their conclusions were based on two survey studies. It is well-known 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. The instrument Reynolds and Ceranic used in their research was valid. However, operationalizing moral judgment in this way may be too abstract and lack contextual information. Freedmanhall and his colleagues 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, people can theoretically define right versus wrong by referring to foundational moral frameworks. However, making a judgment in a decontextualized way is not a proxy to making a judgment within a real context. 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, moral judgment would be measured in a scenario-based way, which provides abundant contextual information and the gain at stake will be real and tangible. To what extent this moral judgment in a hypothesized situation can predict moral behavior in a similar real scenario in an experimental study?
Moral Judgement

Formalism / Deontology

Strong moral Identity (Chronic Accessibility)

H5

H2

H4

Intuitive

Moral Grace (absence of temptation)

H1

Consequentialism / Utilitarianism

Moral Identity

Weak moral Identity (Temporary Accessibility)

Dual processes

Reflective

Moral Will (resistance of temptation)

Temptation

H6

Moral Behavior

Honest Behavior

Figure 2: Diagram of Present Research: an Integrated Approach
Overview of Present Research

The dual-process framework argues that both intuition and reflection interact to produce moral decisions. Intuitive process is thought to be fast, parallel, automatic, effortless, and emotional while reflective process is suggested to be slow, serial, controlled, effortful and neutral (Kahneman, 2003). However, no matter the “Heinz dilemma” used in Kohlberg’s theory, “siblings Incest” in Haidt, or “Trolley dilemma” in Greene’s studies, most of these scenarios lack any element of realism. The current versions of making moral judgments on extreme and unfamiliar situations provide insight about people’s philosophical points of views, but hardly equal to everyday moral reasoning and, therefore, predict moral behavior. The primary purpose of this dissertation is using realistic moral stimuli to investigate the nuances of moral judgment in people’s daily life. Can we find any individual difference in moral judgment? To what extent can we predict people’s everyday moral behavior? The present dissertation intends to show that in “everyday morality,” the deontological thinking is not necessarily the error-prone and biased approach in morality. 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. This research aims to establish a relationship between moral identity and moral judgment and then investigate how moral identity and moral decision act dependently to shape moral behavior.

The present research integrates moral identity and moral judgment to explain
moral behavior from the dual-process model, and its account is tested by three studies. The main objective of this research is to take an integrated approach to explain moral behavior from the dual-process framework. Figure 2 shows a diagram of the present research though some of the paths in this diagram are quite arbitrary and are subjected to further studies.

The researcher analyzes the paths among concepts from the right side of this diagram. What is the psychological mechanism that leads to everyday moral behavior? Study 1 explores the cognitive basis of honest decision using the dual-process model. Are people intuitively the honest person and to be honest is their instinct reaction or people are predisposed attracted by temptation and behave honestly only through the active resistance of temptation? The intuition hypothesis suggests that honest behavior results from the absence of temptation, while the reflection hypothesis argues that honesty results from the active resistance of temptation. Intuition is relatively fast, automatic, whereas reflection is slow, controlled and requires additional time. Subjects’ processing speed will be measured to distinguish intuition from reflection in this study. If after individual socialization and social norms internalization, being honest is a usually comes from an intuitive process, therefore, being honest takes less reaction time, and to be dishonest needs additional cognitive control and longer reaction time. Therefore, hypothesis 1 is to test that everyday moral behavior like honest behavior comes from intuitive process rather than reflective process. Since we are honest automatically, why dishonest behavior is so rampant in our society? Is it because we usually don’t pay enough attention to our moral standard when we are making
decision? If it is the case, can we find a priming effect of moral concepts to inhibit dishonest behavior? Hypothesis 2 want to investigate whether priming people’s moral concepts will inhibit dishonest behavior.

Is there individual difference of psychological mechanisms that lead to honest behavior? Study 2 aims to explore whether individuals with different moral identity uphold different psychological mechanisms of moral behavior. Moral identity reflects the significance and salience of moral values in one’s self-identity. According to the social cognitive conceptualization of moral character (Aquino & Reed, 2002; Lapsley & Narvaez, 2004), moral identity can be understood in terms of the chronic accessibility to moral schemas for construing social events, and a moral person would be one for whom moral constructs are chronically accessible, readily primed and easily activated for social information-processing (Narvaez et al., 2006). For individuals with relatively strong moral identity, moral considerations are abundant in everyday living because morality is rooted at the core of their being. While for those people with weak moral identity, their moral concern is not strong in life, so they need to control themselves and then be honest. In this case, it is reasonable to suggest that moral identity moderate the cognitive basis that behinds honest behavior (tested by Hypothesis 3 and Hypothesis 4).

Before testing moral identity’s role as a moderator, it is necessary to develop a Chinese version of moral identity suitable for this research. It is well-known that Chinese people view morality from a different perspective than their Western correspondents. The researcher needs to build on moral traits with Chinese
characteristics as salience-inducing stimuli to measure moral identity in Chinese context. One additional objective of study 2 is to develop a list of moral traits that have a highest activation potential in Chinese context. The initial aim is to investigate the constellation of moral traits that are important to the Chinese. By linking these moral traits to moral identity, it is possible to develop a trait-based moral identity scale that is reliable and valid in the Chinese context. Furthermore, the researcher wants to investigate whether a moral identity that reflects both cognitive and affective perspectives can predict moral behavior. In general, this study will contribute to the study of moral identity in Chinese culture.

Moral judgment is represented by ethical predisposition in this dissertation. Ethical predisposition refers to the moral frameworks that individuals rely on when facing moral decisions. Research in this area has focused on two most foundational moral frameworks in terms of utilitarianism and deontology, as well as in the related constructs of consequentialism and formalism. How would ethical predisposition interact with moral identity to affect moral behavior? 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. Study 3 aims to explore the relationship among moral identity, moral decision, and moral behavior to see whether a preference for the deontological solution can lead to moral behavior. When making decisions, individuals who preferred deontological ideals to the utilitarian framework may have strong moral identities. Hypothesis 5 tests the relationship between moral identity and moral judgment. Individuals with strong moral
identity are expected to be more sensitive to behavioral norms and principles. This strong motivation of moral identity may interact with preferences for deontology and lead to more moral behavior. The hypothesis 6 suggests that moral identity interacts with moral judgment such that stronger moral identity and a greater preference for deontology will result in a more moral behavior.

Taken together, the findings of this research will contribute to the study of moral identity and moral judgment as well as widen the scope of the dual-processes theory to the field of everyday moral behavior. The present research would provide some insights for people to curtail the moral behavior, and the empirical data gathered from the experiment would shed some light on future study.
Chapter 3 Study 1: Cognitive Basis of Everyday Moral Behavior

Study 1 strives to deepen people’s understanding of the psychological mechanisms underlying everyday moral behavior. The dual-process model states that both intuitive process and reflective process are involved in moral decision. But which process plays a more important part in daily life? After individual socialization and social norms internalization, people automatically and unconsciously prefer to be honest when they come across an opportunity with a dishonest gain. This study tested the automatic processes of honest behavior in an experiment. A reaction time task will be used in this study to partially repeat Greene and Paxton’s (2009) research. This work is worthwhile because (a) replication is important in itself and cross-cultural replication is especially valuable, and (b) there are more recent results indicating that some decisions to behave honestly are a matter of self-control. Reaction time data are usually considered to identify the engagement of additional cognitive processing in task performance (e.g., Collins & Quillian, 1969; Collins & Loftus, 1975; Greene & Paxton, 2009). If we can testify that being honest is determined by the presence of automatic processes (indicated by less reaction time) and being dishonest needs self-control and additional processing time, the postulate is fully validated. Other than partial replication of Greene and Paxton (2009)’s work, another design of this study is a priming experiment. It is interesting to see whether exposure to moral constructs will increase the accessibility to moral schema and then more moral behavior automatically.
Method

Subjects

The researcher posted the subjects recruitment notice both on the bulletin board in the campus as well as appealed to his friends to post the notice on the walls of their Facebook. The notice can be seen in Appendix 2.

Study 1 reports data from 60 adults (33 females, 27 males, aged 18 - 42, and mean age 25.52). All were right-handed (after screening). In order to diversify the subjects, this study collected data from both Hong Kong and Mainland China, university students or white-collar workers from different industries. Those subjects have varied backgrounds. Parts of them were students in Hong Kong Baptist University, City University of Hong Kong, and Chinese University of Hong Kong. Parts of them were office workers worked in different industries, including but not limited to banking, sale, designer, IT, engineer and consumer services. In addition to the data drawn from these 60 subjects, three data were discarded as outliers (outside three standard deviations, 1 subject) or suspicious (2 subjects). The researcher decided to eliminate subjects reflecting suspicions because they may find it morally justified to deceive since the experimenter was attempting to investigate cheating behavior. Behavior of this type did not tie in with the definition of dishonest behavior.

Characteristics of the subjects would be potential factors that affect the experimental result. Some researchers reported that there are differences of anti-social
behaviors, self-serving cognitive distortion, and moral development in gender and age (Li, Fu, Liu, & Wang, 2011; Ma, 1989; Mazar et al., 2008; Rogstad & Rogers, 2008), however, previous researchers that directly investigated honest behavior found no significant differences in age, gender between honest and dishonest subjects (Greene & Paxton, 2009; Mazar et al., 2008). Because these studies focus on honest behavior, demography variables are not the center of the attention though the characteristics of subjects would be matched between different experimental conditions.

Procedures

Our experimental procedures complied with guidelines of the Hong Kong Baptist University’s privacy data ordinances and the experiment has got an ethics exemption from committee on the use of human and animal subjects in teaching and research. Subjects were given written informed consent and fully informed their right to quit and destroy their own data if any uncomfortable feeling caused.

To ensure that subjects had different degrees of moral awareness and not social desirability concerns, a cover story firstly created by Greene and Paxton (2009) was adopted to conceal the real purpose of this study. Participants were introduced to believe that they were joining an intuitive test consisting of several unrelated tasks (see details in Appendix 3). Half of the subjects (n=30) were randomly assigned to the no-priming experiment that served as the replication of Greene and Paxton’s research. The rest of the subjects (n=30) were assigned to the priming experiment, in which subjects needed to read an honesty-related story firstly and summarize the main points of the story (see the story in appendix 4). The chosen story was about a famous
historical figure in China who strived to be an honest person and got immense reward through this trait during his career development. Participants were told that they would engage in two unrelated tasks in this study.

Both in the no-priming experiment and priming experiment, a modified paradigm originally developed by Greene and Paxton (2009) was used to measure subjects’ cheating behavior. In order to protect subjects’ privacy rightfully, subjects were asked to input a password as subject ID at the beginning. Subjects were required to use their intuitive ability to participate in a gambling game (Craps) on a computer. Before testing, they needed to complete 12 practice trials to become familiar with the task and ensure their task competence. At this moment, the experimenter pretended to receive a call and have to handle it immediately. After encouraging the subjects to follow the directions and solve anything by their own judgment, the experimenter left the room.

Before the study, ten subjects were invited to join a pilot study to improve and validate the experimental design. Their feedbacks, including using the dice other than coin to make the task attractive, changing wording and phrasing to make the introduction clearer etc., were highly appreciated and considered ameliorating the final design.

In formal research, subjects were told to use their intuitive ability to predict the computerized dice’s number as being “big” or “small”; 4, 5, 6 were “big” and 1, 2, 3 were “small” (see the dice in appendix 5). Trials appeared in random order in a series of 36 trials in each block. Of the total of four blocks, two of them comprised “recording condition (A)” and the rest comprised “non-recording condition (B)” (four blocks
appeared in ABBA or BAAB). Under the “recording condition”, subjects needed to press the “F” key for “Big” or “J” key for “Small” that enabled the computer to record their prediction, while under the “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. Software “Paradigm” was applied to record subjects’ reaction time here (details of this software can be seen in http://www.paradigmexperiments.com/). 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 showed that their previous prediction was right, and then subjects would get $5 in the trial. However, if the dice was 4, 5, 6 and the self-report result was wrong, which meant that the previous prediction was “small”, they would lose $2 (average of 1, 2, 3). If the dice was 1, 2, 3, and self-report result was wrong that meant that their previous prediction was “big”, they would lose $5 (average of 4, 5, 6). Details of the schedule of payment can be seen in appendix 3. The non-recording condition provided subjects with opportunities to cheat, given that the prediction’s accuracy was totally based on the subjects’ self-report result. The self-report accuracy under the non-recording condition was an index of cheating behavior. Subjects were paid the cumulative value of their gains/losses. Net losses were capped at $40, and net winnings were capped at $400 (USD1=HKD7.75).

When the experiment was over, subjects’ understanding of the study was assessed by a short interview which included three open-ended questions:

Question1: Can you tell me something about your thoughts and experiences about
this study?

*Question 2*: Do you know the intention of this experiment?

*Question 3*: The design is a demo. Are you aware that you can cheat in this experiment?

After debriefing and receiving their due rewards, the subjects could leave the lab. Since cheating is a sensitive topic, some participants felt embarrassing when they knew that their cheating behavior were recorded and investigated in the experiment. When these happened, the researcher tried his best to pacify subject’s emotion. The researcher emphasized that it was just a lab behavior. No one wanted to label a person and generalize his or her behavior to the real world. Finally, no subject was upset when he or she left the lab.

Result

Participants’ answers to the post-experimental questions revealed that all the subjects were aware of the opportunity to cheat, and two subjects were excluded based on their responses to these questions as they realized the real purpose of the study and cheated intentionally. The experimental design of the no-priming experiment was a replication of Greene and Paxton’s (2009) research. Study 1 reported the result of this experiment first, and then compared the difference between the no-priming experiment and priming experiment.
Result of the no-priming experiment

Reaction time and self-report accuracy were the main measured variables in this experiment. The researcher found no significant difference of reaction time and accuracy in experimental design,\textsuperscript{5} gender and region of the subjects under the no-priming condition (seen in Table 1).

Table 1: Means and standard deviation for reaction time (RT, millisecond) and self-report accuracy

<table>
<thead>
<tr>
<th></th>
<th>RT at recording condition</th>
<th>RT at non-recording condition</th>
<th>Accuracy at recording condition</th>
<th>Accuracy at non-recording condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD),%</td>
<td>M(SD),%</td>
</tr>
<tr>
<td>Group A(16)</td>
<td>543.72 (149.51)</td>
<td>645.75 (201.66)</td>
<td>0.52 (0.06)</td>
<td>0.62 (0.11)</td>
</tr>
<tr>
<td></td>
<td>t=0.38</td>
<td>t=0.49</td>
<td>t=-1.28</td>
<td>t=-0.76</td>
</tr>
<tr>
<td></td>
<td>p=0.72</td>
<td>p=0.63</td>
<td>p=0.22</td>
<td>p=0.45</td>
</tr>
<tr>
<td>df=28</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male(14)</td>
<td>569.51 (143.93)</td>
<td>681.23 (173.31)</td>
<td>0.54 (0.07)</td>
<td>0.61 (0.11)</td>
</tr>
<tr>
<td></td>
<td>t=0.70</td>
<td>t=1.60</td>
<td>t=0.11</td>
<td>t=-1.11</td>
</tr>
<tr>
<td></td>
<td>p=0.49</td>
<td>p=0.12</td>
<td>p=0.92</td>
<td>p=0.28</td>
</tr>
<tr>
<td>Female(16)</td>
<td>536.60 (108.89)</td>
<td>583.84 (161.11)</td>
<td>0.54 (0.08)</td>
<td>0.66 (0.12)</td>
</tr>
<tr>
<td></td>
<td>t=0.13</td>
<td>t=-0.83</td>
<td>t=0.85</td>
<td>t=1.50</td>
</tr>
<tr>
<td></td>
<td>p=0.90</td>
<td>p=0.41</td>
<td>p=0.40</td>
<td>p=0.14</td>
</tr>
<tr>
<td>Mainland China(15)</td>
<td>548.87 (109.60)</td>
<td>603.16 (139.32)</td>
<td>0.55 (0.08)</td>
<td>0.67 (0.11)</td>
</tr>
<tr>
<td>Hong Kong(15)</td>
<td>555.04 (145.93)</td>
<td>655.47 (199.73)</td>
<td>0.53 (0.07)</td>
<td>0.61 (0.11)</td>
</tr>
<tr>
<td></td>
<td>t=0.03</td>
<td>t=-0.83</td>
<td>t=-0.85</td>
<td>t=-1.50</td>
</tr>
<tr>
<td></td>
<td>p=0.90</td>
<td>p=0.41</td>
<td>p=0.40</td>
<td>p=0.14</td>
</tr>
<tr>
<td>df=28</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Manipulation checks

Table 2 reports the descriptive statistics of accuracy measured in the no-priming study. As expected, participants reported extremely high levels of accuracy under the non-recording condition than under the recording condition in the no-priming experiment ($M=.64$, SD=.11 vs. $M=.54$, SD=.07, $t$ (29) =5.19, $p<.001$, Cohen’s $d=1.035$). What’s more, it was supposed that the actual accuracy under the
non-reporting condition was nearly equal to the expected value of .50. However, the self-report accuracy ($M=0.64$) was improperly higher than the expected accuracy of .50 ($t(29)=6.64, p<.001$). Because the self-report accuracy was remarkably higher (14%) than the expected value, it is safe to claim that the inflation of accuracy resulted from participants’ dishonest behavior. The manipulated effect for inducing dishonest behavior was exceedingly rigid and conservative ($p<.001$).

### Table 2: Means and standard deviations of accuracy between conditions

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recording</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual accuracy</td>
<td>0.52</td>
<td>0.06</td>
</tr>
<tr>
<td>Self-report accuracy</td>
<td>0.54</td>
<td>0.07</td>
</tr>
<tr>
<td><strong>Non-recording</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-report accuracy</td>
<td>0.64</td>
<td>0.11</td>
</tr>
</tbody>
</table>

**Reaction time of win and loss under the different conditions**

Under the recording condition, if the participant reported that his or her prediction was correct, the subject won the money because he or she was truly correct; however, under the non-recording condition, the participants could cheat and pretend that he or she was correct to win the gain. Since the wins under the recording condition were true reactions, it is expected that reaction time under the recording condition to be shorter than that under the non-recording condition, as wins under the non-recording condition involved cheating and were thus just partially true reactions. In addition, under the recording condition, if the participant’s prediction was wrong, the subject lost money and could do little about it. By contrast, things were complicated under the non-recording condition. According to the “Grace” hypothesis, subjects lost money
because he or she was not aware of any temptation and reacted honestly as under the recording condition. Based on the “Will” hypothesis, it was also likely that participants lost money because they chose not to cheat, which indicated that the subject needed to resist the temptation of cheating and chose to behave with so-called “limited honesty” (Greene & Paxton, 2009). If this inference is right, then, it is reasonable to expect that the reaction time on average in the non-recording loss trials (including “limited honesty”) should be longer than that in the recording loss trials (“almost pure honest”).

A two consequences (Win vs. Loss) X two conditions (Recording vs. Non-recording) within-subject ANOVA was conducted to test the effects (seen in Table 3). The results revealed that the main effects of consequences ($F(1,29)=50.78, p<.001$, partial $\eta^2=0.637$) and conditions ($F(1, 29)=18.28, p<.001$, partial $\eta^2=0.387$) were both significant, indicating that reporting loss needed more reaction time across conditions and the recording condition inhibited cheating between win and loss. No interaction was found between recording or non-recording and win or loss ($F (1, 29) =.04, p=.85$, partial $\eta^2=0.001$).

Table 3: ANOVA test of reaction time between win and lost at different conditions

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording vs. Non-recording</td>
<td>259455.12</td>
<td>1</td>
<td>259455.12</td>
<td>18.28</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>411694.14</td>
<td>29</td>
<td>14196.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Win vs. loss</td>
<td>672901.63</td>
<td>1</td>
<td>672901.63</td>
<td>50.78</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>384260.06</td>
<td>29</td>
<td>13250.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recording or Non-recording*</td>
<td>275.73</td>
<td>1</td>
<td>275.73</td>
<td>.04</td>
<td>.854</td>
</tr>
<tr>
<td>Win or loss</td>
<td>230782.27</td>
<td>29</td>
<td>7958.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The reaction time for a win under the non-recording condition was significantly longer than under the recording condition ($M=582.01$ vs. $M=485.98$) since dishonest behavior under the non-recording condition involved more cognitive activity ($t\ (29) =3.83, \ p=.001$, Cohen’s $d=0.619$). This is an evidence to support the claim that being honest is an automatic choice for people, and cheating causes response conflict and longer reaction time.

The reaction time for a loss under the non-recording condition was also longer than under the recording condition ($M=728.75$ vs. $M=638.78$, $t\ (29) =3.09, \ p=.004$, Cohen’s $d=0.444$). Under the non-recording condition, behaving with “limited honesty” meant that the importance of maintaining an honest self-image overrode the dishonest gain and forgone potential gain was associated with cognitive control and response inhibition (Gino et al., 2011; Greene & Paxton, 2009; Mazar et al., 2008).

**Classification of subjects into two different types**

As what has been stated earlier, under the non-recording condition, participants may act differently when confronted with opportunities for dishonest gain. The researcher labeled subjects whose self-report accuracy was over one standard deviation than the mean as Type 1\(^6\). Seven subjects reporting improbably high levels of accuracy at the individual level were classified as Type 1. This conservative threshold was adopted to ensure an adequate number of cheat trials per dishonest subject, and no one was classified to this group unjustly. The other 23 subjects were grouped as Type 2.

\(^6\) To avoid stigmatized the subjects in this study, the researcher classified them as type 1 and type 2, rather than “dishonest group” and “honest group”.

This was the largest group of subjects whose accuracy was significantly lower than the accuracy of Type 1 \( (M=.59, SD=.08 \text{ vs. } M=.79, SD=.03, t(28) = 6.85, p < .001, \text{ Cohen’s } d = 3.549) \). Since the effect size was extremely large, we are confident to claim that Type 1 subjects were more likely to commit a dishonest behavior. The researcher emphasizes again that this research focused on these subjects’ behavior only and makes no claims concerning their more stable personal traits or their moral standards in real life.

Referring to the characteristics of Type 1 and Type 2 subjects, there were no significant differences in age, gender or region.

**Reaction time of different types of subjects under the non-recording condition**

The non-recording condition provided enough room to cheat. A 2 types (Type 1 vs. Type 2) X 2 consequences (Win vs. Loss) mixed ANOVA revealed a significant interaction \( (F(1, 28) = 4.43, p = .04, \text{ partial } \eta^2 = 0.137, \text{ seen in Table 4}) \). Simple effect analysis showed that when reporting wins, the reaction time did not vary between different types \( (M_{Type 1} = 627.81, SD_{Type 1} = 135.55 \text{ vs. } M_{Type 2} = 568.07, SD_{Type 2} = 204.76, F = 0.52, p = .48, \text{ partial } \eta^2 = 0.018) \), but when reporting loss, the reaction time of Type 1 was longer than Type 2 \( (M_{Type 1} = 886.24, SD_{Type 1} = 338.64 \text{ vs. } M_{Type 2} = 680.82, SD_{Type 2} = 164.68, F = 4.94, p = .04, \text{ partial } \eta^2 = 0.150) \).

Subjects of Type 1 needed a longer reaction time to report a loss than Type 2. This result indicated that, for those who were more likely to be dishonest, it took more reaction time for them to resist the temptation and behave with “limited honesty” (Gino et al., 2011; Mazar et al., 2008).
Table 4: Reaction time of reporting win or loss between different types at non-recording condition

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between subject effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>2.048E7</td>
<td>1</td>
<td>2.048E7</td>
<td>293.03</td>
<td>.000***</td>
</tr>
<tr>
<td>Type (1,2)</td>
<td>188662.84</td>
<td>1</td>
<td>188662.84</td>
<td>2.70</td>
<td>.112</td>
</tr>
<tr>
<td>Error</td>
<td>1957324.37</td>
<td>28</td>
<td>69904.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Within-subject effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Win or loss</td>
<td>369665.09</td>
<td>1</td>
<td>369665.09</td>
<td>28.75</td>
<td>.000***</td>
</tr>
<tr>
<td>Type *. Win or loss</td>
<td>56945.88</td>
<td>1</td>
<td>56945.88</td>
<td>4.430</td>
<td>.044*</td>
</tr>
<tr>
<td>Error</td>
<td>1957324.37</td>
<td>28</td>
<td>69904.44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Result of the priming experiment

No significant difference of accuracy is found in experimental deviations or characteristics of the subjects as in the no-priming experiment.

Manipulation checks

Before study 1, four volunteers were invited to evaluate the appropriateness of the honesty-related story (seen in appendix 4). All of the four volunteers agreed that this story could activate people’s honesty-related concepts, and the story was suitable in this study. In addition, when asked what they had got between the lines, the subjects frequently mentioned topics such as ‘‘to be honest’’ and ‘‘honesty is as indispensable as talent’’, which confirmed the expectation that the story increased the accessibility to honesty-related concepts.

The researcher compared the result of the priming experiment with no-priming experiment (seen in Table 5). As expected, participants in the priming experiment also reported higher accuracy under the non-recording condition than under the recording
condition \( (M=.57, SD=.08 \text{ vs. } M=.52, SD=.08, t(29) = 2.57, p=.02, \text{Cohen’s } d=0.644)\).

However, the discrepancy was at a less significant level than the result in the no-priming experiment \( (M=.64, SD=.11 \text{ vs. } M=.54, SD=.07, t(29) = 5.19, p<.001, \text{Cohen’s } d=1.035)\). This result indicates that though participants cheated under the non-recording condition, they cheated less in the priming experiment than in the no-priming experiment.

### Table 5: Accuracy between different conditions in priming and no-priming study

<table>
<thead>
<tr>
<th>Accuracy</th>
<th>Study</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording</td>
<td>No-priming Study</td>
<td>0.54</td>
<td>0.07</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Priming Study</td>
<td>0.52</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>Non-recording</td>
<td>No-priming Study</td>
<td>0.64</td>
<td>0.11</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Priming Study</td>
<td>0.57</td>
<td>0.08</td>
<td></td>
</tr>
</tbody>
</table>

Reaction time at recording condition and non-recording condition

Independent sample T test shows that reaction times at recording condition and non-recording condition were not significantly different between no-priming study and priming study (seen in Table 6). As compared with study1, this result indicates that the priming effect of moral identity did not cause any additional neural activity in this study. The effect of priming was high likely occurred in automatic processes.

### Table 6: Reaction time at different conditions between no-priming and priming study

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard deviation</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording</td>
<td>No-priming Study</td>
<td>551.96</td>
<td>126.84</td>
<td>1.18</td>
</tr>
<tr>
<td></td>
<td>Priming Study</td>
<td>598.62</td>
<td>176.73</td>
<td></td>
</tr>
<tr>
<td>Non-recording</td>
<td>No-priming Study</td>
<td>629.31</td>
<td>171.28</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>Priming Study</td>
<td>620.85</td>
<td>217.69</td>
<td></td>
</tr>
</tbody>
</table>
The priming effect of moral constructs

Table 7: The priming effect of moral constructs on moral behavior

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between subject effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>38.28</td>
<td>1</td>
<td>38.28</td>
<td>38968.46</td>
<td>0.00</td>
</tr>
<tr>
<td>Priming effect</td>
<td>0.06</td>
<td>1</td>
<td>0.06</td>
<td>5.56</td>
<td>0.02</td>
</tr>
<tr>
<td>Error</td>
<td>0.57</td>
<td>58</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Within-subject effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>0.17</td>
<td>1</td>
<td>0.17</td>
<td>29.33</td>
<td>0.00</td>
</tr>
<tr>
<td>Priming*conditions</td>
<td>0.02</td>
<td>1</td>
<td>0.02</td>
<td>2.73</td>
<td>0.10</td>
</tr>
<tr>
<td>Error</td>
<td>0.34</td>
<td>58</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Priming effect (non-priming vs. priming)
Conditions (recording vs. non-recording)

The researcher conducted a mixed ANOVA with participants’ self-report accuracies under different conditions (recording vs. non-recording) as a within-subjects factor and priming effect of moral constructs (priming experiment vs. no-priming experiment) as a between-subjects factor (seen in Table 7). As predicted, self-report accuracy was higher under the non-recording condition than under the recording condition \(F(1, 58) = 29.33, p < .001, \text{partial } \eta^2 = 0.336\), indicating that participants cheated under the non-recording condition. More importantly, the priming effect was also significant \(F(1, 58) = 5.56, p = .02, \text{partial } \eta^2 = 0.087\). Consistent with the hypothesis, participants in the priming experiment reported significantly lower levels of accuracies \(M = .57, SD = .08\) than participants in the no-priming experiment \(M = .64, SD = .11\), \(t(58) = 2.57, p = .01, \text{Cohen’s } d = 0.664\). These results indicate that priming and
making moral constructs easily accessible did inhibit dishonest behavior even when the participants were provided with an opportunity to cheat. In addition, no significant interaction was found here ($F (1, 58) = 2.73, p = .10$, partial $\eta^2 = 0.045$).

Discussion

This study demonstrated the automatic processes that lead to honest behavior. In the no-priming experiment, individuals who mostly behaved honestly did not engage in controlled cognitive processes while those who usually behaved dishonestly did. This fact suggests that “honest” individuals automatically recognize the immorality of cheating on the given task, and they were not tempted by the opportunity for dishonest gain. For “honest” people, they made their honest decision at an unconscious level. By contrast, individuals who behaved dishonestly exhibited increased activity in controlled cognitive processes, suggesting that they used cognitive resources to make decisions. These results are consistent with Greene and Paxton’s (2009) research. In the priming experiment, an honest story increased the accessibility of moral concepts and decreased cheating automatically. A higher accessibility to honesty-related concepts in the priming experiment made individuals succeed in recognizing the moral aspect of a given decision and then activate a moral decision-making script (Lapsley & Narvaez, 2004). Thus, the results showed that external stimuli might increase people’s accessibility to moral schemas in their minds and decrease the possibility of people’s involvement in immoral behavior (Aquino et al., 2009; Ruedy & Schweitzer, 2010).
Chapter 4 Study 2: Moral Identity as a Moderator

Study 2 aims to demonstrate the different mechanisms underneath honest behavior, and the important role of moral identity. It is hypothesized that different mechanisms lead different people to behave ethically. Before testing moral identity’s role as a moderator, it is necessary to develop an appropriate tool to measure moral identity in Chinese context.

Study 2A: Measuring Moral Identity in Chinese Context

This part of study intends to find out moral traits that are cherished by Chinese people. These moral traits will be used as stimuli to activate Chinese people’s moral identity. The psychometric property of this new developed instrument will also be tested in this study.

Pilot Study: Trait Exploration

Aquino and Reed (2002) took an inductive process to select those identity-invoking stimuli. In this study, a deductive approach will be used to identify traits that people consider as core traits for a moral person in Chinese culture. The moral list was formed from two sources: (1) The researcher retained Aquino and Reed’s original nine traits in this moral list, (2) The researcher selected another 14 traits from Li and Yang’s research (Li & Yang, 1988). In the research, Li and Yang intended to explore the traits, characters and qualities hold by Chinese people, and found that these 14 traits have the heaviest loading on the factor “Kindness/plain vs. Sinister/boastful
(善良誠樸/陰險浮誇)”, considered closely related to moral judgment. For comparison purposes, five traits (cunning, hypocrisy, treacherousness, insidiousness, and mean), which possibly believed to be characteristic of an immoral person, were included here, as well as other two traits (confident and talkative), which should be viewed as being fairly neutral in judgments of moral character. In this way, researcher formed an initial list of moral traits with 30 words, posted the survey on a social network site (named QQ Zone, like Facebook) and invited people to indicate on a 5-point scale ranging from 1 (absolutely unnecessary) to 5 (absolutely necessary) the extent to which they believed that it was necessary for someone to possess each of the characteristics to be considered a moral person (seen in Table 8). The sample consisted of people who have varying levels of educational, work, and life experience. Their ages ranged from 17-43, the average was 25 and SD is 4.40. Of the 112 participants, 39.3% were male, and 60.7% female; regarding the status quo, 45.5% were undergraduates studying at university, 12.5% were postgraduates, and 42% worked in diversifying industries.

<table>
<thead>
<tr>
<th>Table 8: Trait exploration in the pilot study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 可信的  credible</td>
</tr>
<tr>
<td>Mean</td>
</tr>
</tbody>
</table>
On the average, moral traits were judged as being considerably more essential than those presumed to be either fairly neutral or immoral (4.11 vs. 3.04 vs. 1.52, p<0.01). This result indicates that a lot of people considered the selected moral traits as being more necessary for picturing a moral person. Compare with Aquino and Reed’s research (Aquino & Reed, 2002), we see the overlap as well as the difference with the proposed traits. Caring, fair, and helpful were rated highly in this research, but generous and hardworking were not considered as essential to be a moral person.

More importantly, the researcher found some traits that did not show up at Aquino and Reed’s research but rank highly in the list. For example, filial piety was regarded as a necessary trait for being a moral person. In a society where filial duty is considered as sacred, it is not a surprise to see that Chinese people consider filial piety as an indispensable moral trait. The difference between selected traits and Aquino and Reed’s proposed traits indicates that we cannot employ their instrument directly to measure people’s moral identity in the Chinese context. However, this pilot study has some limitations that we cannot ignore. First, despite the fact that the participants in this study have diversified backgrounds, some of the participants were the researcher’s friends. It is argued that there was sampling error here, and the result could be bias. Second, though the researcher took a deductive approach to construct the selected moral traits in the pilot study, the selecting strategy was not guided by any theoretical framework, and we had possibly missed some core traits in the list.
**Study 2A1: Trait Identification**

In study 2A1, the research used an online platform named “Sojump” ([www.sojump.com](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, Zhang, Su, & Zhou, 2012). Recently, research using Web-based data has become increasingly common (e.g., Kahneman & Krueger, 2006; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2006; 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, Vazire, Srivastava, & John, 2004). In addition to these participants (n=212) who finished the survey online, 24 undergraduates enrolled in a psychology course, and 28 Master of Public Administration (MPA) students in a Hong Kong local university also participated in this study. Table 9 shows descriptive spastics of the sample.

<table>
<thead>
<tr>
<th>Source</th>
<th>Collecting Way</th>
<th>Gender</th>
<th>Age</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainland China</td>
<td>Online</td>
<td>Female</td>
<td>128</td>
<td>28.35, 6.72</td>
</tr>
<tr>
<td>(n=212)</td>
<td></td>
<td>Male</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>High school or lower=42; bachelors=158; postgraduates=20</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>In class</td>
<td>9</td>
<td>18</td>
<td>31.23, 7.45</td>
</tr>
<tr>
<td>(n=52)</td>
<td>MPAs</td>
<td>1 missing data</td>
<td>3 missing data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Undergraduates</td>
<td>17</td>
<td>7</td>
<td>21.79, 2.52</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Undergraduates</td>
</tr>
<tr>
<td>Total: N=264</td>
<td></td>
<td>154</td>
<td>109</td>
<td>27.96, 6.83</td>
</tr>
</tbody>
</table>

*MPA=Master of Public Administration*
To form a more comprehensive moral traits list, the researcher developed the new list under the guide of Ma’s theory (Ma, 2009). Ma (2009) proposed ten moral characters for moral education: humanity, intelligence, courage, conscience, autonomy, respect, responsibility, naturalness, loyalty, and humility. Other than these ten primary moral characters, within every character, he also complemented several related moral characters. Ma claimed that the proposed ten primary moral characters are universal for all cultures. In reference to Ma’s theory, seven notable traits that were ignored in the pilot study were added and then a new list of moral traits was used in this study. These seven traits are: courage, naturalness, authenticity, pureness, respect, humility, and persistence. For comparison purpose, the researcher also selected three presumed to be immoral traits (hypocrisy, insidiousness, and corruptness) and one neutral trait (talkativeness). All the participants in this study were asked to fill a 5-point Likert-type scale as what is used in the pilot study.

Results

(1) The mean tabulation of all the traits

The means of all the moral traits, the immoral traits (three traits) and one neutral trait are shown in Table 10. On average, the diverse sample judged all the moral traits to be more necessary than those assumed to be immoral traits or neutral traits. This result indicates that the alternative selected moral traits are testable in describing people’s moral identity.
(2) The top ten moral traits

Since the aim of this study is not to generate an exhaustive list of traits that map onto every person’s moral identity, the researcher only focuses on the top ten traits of rank in this study. Other than caring, fair, helpful and honest that were proposed by Aquino and Reed, this study find six new traits that were different from their list of traits. Out of the six traits, credibility, authenticity, and incorruptness are three traits that relate with honesty. This result echoed Li and Yang (1988)’s claim that honesty is the most basic and most highly honored trait when Chinese people describe a moral person. Responsibility and respect are two missing traits that are also highly praised in the Western world, recalling how Thomas Lickona emphasized responsibility and respect as the two main characters that are deserved for moral education (Lickona, 2009). If we claim that respect and responsibility are the two universal moral traits that

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th></th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>可信的</td>
<td>credible</td>
<td>4.70</td>
<td>0.54</td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>負責的</td>
<td>responsible</td>
<td>4.64</td>
<td>0.59</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>孝順的</td>
<td>filial</td>
<td>4.63</td>
<td>0.58</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>善良的</td>
<td>caring</td>
<td>4.61</td>
<td>0.64</td>
<td>21</td>
</tr>
<tr>
<td>5</td>
<td>公正的</td>
<td>fair</td>
<td>4.59</td>
<td>0.58</td>
<td>22</td>
</tr>
<tr>
<td>6</td>
<td>誠實的</td>
<td>honest</td>
<td>4.55</td>
<td>0.63</td>
<td>23</td>
</tr>
<tr>
<td>7</td>
<td>真實的</td>
<td>authentic</td>
<td>4.55</td>
<td>0.66</td>
<td>24</td>
</tr>
<tr>
<td>8</td>
<td>尊重的</td>
<td>respectful</td>
<td>4.52</td>
<td>0.65</td>
<td>25</td>
</tr>
<tr>
<td>9</td>
<td>廉潔的</td>
<td>incorrupt</td>
<td>4.50</td>
<td>0.66</td>
<td>26</td>
</tr>
<tr>
<td>10</td>
<td>助人的</td>
<td>helpful</td>
<td>4.47</td>
<td>0.67</td>
<td>27</td>
</tr>
<tr>
<td>11</td>
<td>忠誠的</td>
<td>loyal</td>
<td>4.44</td>
<td>0.71</td>
<td>28</td>
</tr>
<tr>
<td>12</td>
<td>友善的</td>
<td>friendly</td>
<td>4.32</td>
<td>0.76</td>
<td>29</td>
</tr>
<tr>
<td>13</td>
<td>敬業的</td>
<td>devoted</td>
<td>4.32</td>
<td>0.76</td>
<td>30</td>
</tr>
<tr>
<td>14</td>
<td>宽容的</td>
<td>tolerant</td>
<td>4.30</td>
<td>0.76</td>
<td>31</td>
</tr>
<tr>
<td>15</td>
<td>自律的</td>
<td>self-discipline</td>
<td>4.29</td>
<td>0.67</td>
<td>32</td>
</tr>
<tr>
<td>16</td>
<td>有人情味的</td>
<td>warm</td>
<td>4.29</td>
<td>0.74</td>
<td>33</td>
</tr>
<tr>
<td>17</td>
<td>感恩的</td>
<td>grateful</td>
<td>4.26</td>
<td>0.87</td>
<td>34</td>
</tr>
</tbody>
</table>

*N=264
Aquino and Reed had missed, filialness and incorruptness are two distinctive traits that are specially honored in Confucian value systems. In classic works, it is noted that Confucian scholars proposed filialness and incorruptness as primary moral traits (Hwang, 1999). Altogether, the selected ten traits also appear to have content validity as they corresponded to Confucian’s so-called eight primary traits (e.g., Tang, 1986). The eight primary traits which are: filialness, respect, loyal, honest, politeness, fair, incorruptness, and humiliation, being the selected traits, highly overlap with Confucian proposed traits. From the foregoing, it is justifiable to use the selected ten traits as salience-inducing stimuli to measure moral identity in Chinese context. These ten traits are credibility, responsibility, filialness, care, fair, honesty, authenticity, respect, incorruptness, and helpfulness.

Table 11: Top ten important moral traits in Hong Kong and Mainland China, respectively

<table>
<thead>
<tr>
<th>Hong Kong (n=52)</th>
<th>Mean</th>
<th>SD</th>
<th>Mainland China (n=212)</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 可信的</td>
<td>4.73</td>
<td>0.45</td>
<td>1 可信的</td>
<td>4.69</td>
<td>0.57</td>
</tr>
<tr>
<td>2 廉洁的</td>
<td>4.65</td>
<td>0.62</td>
<td>2 孝顺的</td>
<td>4.67</td>
<td>0.54</td>
</tr>
<tr>
<td>3 公正的</td>
<td>4.65</td>
<td>0.62</td>
<td>3 负责的</td>
<td>4.66</td>
<td>0.59</td>
</tr>
<tr>
<td>4 真实的</td>
<td>4.63</td>
<td>0.60</td>
<td>4 善良的</td>
<td>4.66</td>
<td>0.56</td>
</tr>
<tr>
<td>5 负责的</td>
<td>4.56</td>
<td>0.57</td>
<td>5 尊重的</td>
<td>4.61</td>
<td>0.54</td>
</tr>
<tr>
<td>6 诚实的</td>
<td>4.44</td>
<td>0.64</td>
<td>6 诚实的</td>
<td>4.58</td>
<td>0.63</td>
</tr>
<tr>
<td>7 孝顺的</td>
<td>4.44</td>
<td>0.73</td>
<td>7 公正的</td>
<td>4.57</td>
<td>0.57</td>
</tr>
<tr>
<td>8 善良的</td>
<td>4.40</td>
<td>0.89</td>
<td>8 真实的</td>
<td>4.53</td>
<td>0.67</td>
</tr>
<tr>
<td>9 忠诚的</td>
<td>4.38</td>
<td>0.89</td>
<td>9 助人的</td>
<td>4.51</td>
<td>0.60</td>
</tr>
<tr>
<td>10 助人的</td>
<td>4.31</td>
<td>0.88</td>
<td>10 忠诚的</td>
<td>4.46</td>
<td>0.66</td>
</tr>
</tbody>
</table>

To investigate whether the selected ten traits provide cross-sample validity, other than the sample from Mainland China, a sample consisted of 28 postgraduates and 24 undergraduates from Hong Kong was also reported in this study. It is well-known that Hong Kong is a society where the Eastern and Western cultures meet (Lam & Shi,
2008). It is believed that the moral traits honored in Hong Kong may be different from those in Mainland China. Table 11 shows the top ten traits rated by the Hong Kong and Mainland China samples, respectively. As depicted on Table 11, though slightly ranked in different order, the top ten traits judged by the Hong Kong people highly overlap with those proposed by the Mainland China people. This result provides evidence that the ten traits have cross-sample robustness, and it is justifiable to select them as moral identity salient-inducing stimuli.

(3) Two different categories: rule-based traits or social concern traits

For the selected ten moral traits, the researcher classified them into two categories according to the different nature of morality involved: traits that involve rules and laws (e.g., fair and incorruptness) and traits pertaining to social concern (e.g., helpfulness and care). The former represents the cognitive orientation based on rules and principles and the latter stands for the affective orientation rooted in emotion and feelings (Smith & Oakley III, 1997). The distinction between Kohlberg’s justice orientation and Gilligan’s care orientation is the best example of the difference of these two categories (Gilligan & Attanucci, 1988; Gilligan, 1977).

In order to establish structural validity of grouping the traits into two categories, four individuals were asked to divide the ten traits into the two groups that are most appropriate. After analyzing the interactive reliability, a CFA (confirmation factor analysis) was conducted to examine the validity. Credibility, responsibility, fair, authenticity, and incorruptness were regarded as rule-based traits and filialness, care, honesty, respect, and helpfulness were classified as social concern traits. The content
validity meets the requirement of psychometrics, $\chi^2 (34, 264) = 113.13$, $CFI=0.88$, $TLI=0.84$, $RMSEA=0.09$, $SRMR=0.06$. For further statistical analyses, the researcher calculated the mean scores for each of the two categories and abbreviated the mean score for rule-based traits as RULE and the social concern traits as SOCCON. Cronbach’s $\alpha$ were .75 and .71 for the RULE ($M=4.59$, $SD=0.43$) and SOCCON ($M=4.55$, $SD=0.44$) scales, respectively.

(4) Gender difference

There have been numerous studies concerning whether men and women differ in the way they make moral judgments. Gilligan (1977) proposed a gender-sensitive hypothesis of moral values as against Kohlberg’s model of cognitive moral development. Her view was further illustrated by her and her colleague Attanucci (1988) who suggested that men make moral judgments depend on rules and laws while women are more contextually based and involve concerns for interpersonal needs. As we seen from Table 12, women have a high moral standard than men in both rule-based traits and social concern traits since they regarded more moral traits as necessary to be moral people. There are gender-related differences in the evaluation of moral trait. The result does not support Gilligan’s psychological hypothesis that male advocate in rule-based issues and females pay more attention to issues of social concern. However, the finding is consistent with some other empirical studies that found that female seems more ethical (Deshpande, Joseph, & Maximov, 2000; Franke, Crown, & Spake, 1997; Lam & Shi, 2008; Ruegger & King, 1992).
(4) Region differences

It is widely accepted that there are cultural differences in moral attitudes and behaviors. Though Mainland China and Hong Kong share the influence of traditional Confucian values, Hong Kong is a modernized economy that has a higher respect for law and individualism value. Based on this consensus, it is reasonable to hypothesize that firstly, people in Hong Kong have a lower moral standard concerning traits involving social and personal relations than people in Mainland China. Secondly, Hong Kong people have higher moral standard concerning law-based traits than the people in Mainland China. However, taking into consideration the fact that the Mainland China is undergoing modernization with declining collectivist, the differences between these two regions are less certain. The first hypothesis was upheld that the value of SOCCON in Mainland China was greater than that of the Hong Kong’s (M_{China}= 4.61 vs. M_{HK}=4.35, t=15.08, p<.001, Cohen’s d=0.61). The second hypothesis was not supported though the value of RULE in Hong Kong was numerical higher than that of the Mainland China’s (M_{China}=4.58 vs. M_{HK}=4.65, t=0.95, p=.33). Comprehensively, this result indicates that Mainland China still embraces the collectivist socialist tradition that concerns interpersonal need and harmony (seen in Table 13). At the same time, with its modernization, the people at the present pay increasing attention to the
value of law and rule (Li, 2010). However, we should be cautious of this finding since the researcher used different sampling strategies in Mainland China and Hong Kong. The data collected in Mainland were from an online platform, while the data in Hong Kong were from classroom. In this sense, this finding needs further test in future studies.

Table 13: Mean differences of moral traits by regions

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>RULE</td>
<td>Mainland China</td>
<td>4.58</td>
<td>0.44</td>
<td>0.95</td>
</tr>
<tr>
<td></td>
<td>Hong Kong</td>
<td>4.65</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>SOCCON</td>
<td>Mainland China</td>
<td>4.61</td>
<td>0.40</td>
<td>15.08</td>
</tr>
<tr>
<td></td>
<td>Hong Kong</td>
<td>4.35</td>
<td>0.51</td>
<td></td>
</tr>
</tbody>
</table>

Study 2A2: Instrument Development

Study 2A1 has selected ten traits that may reliably reflect both rule-based and social concerned issues. Study 2A2 intends to develop an instrument measuring Chinese people’s moral identity based on these moral traits. The construction of Aquino and Reed’s moral identity scale was founded on Erikson’s definition of the properties of identity: identity is rooted in the core of one’s being meaning to be true to one’s actions (Aquino & Reed, 2002, Erikson, 1980; 1994).

Aquino and Reed’s work laid the foundation for this study. The researcher selected ten items from Aquino and Reed’s research. Two English-majored experts translated the items from English into Chinese by using back-translation procedures. At the same time, two similar items that had the highest loading factor in Wan and Yang’s (2008) research were adapted to measure internalization and symbolization respectively (see Table 15). The researcher presented study 2A1’s ten traits as moral stimuli and asked
subjects all the 12 items. Since this study built the items on sound theory and
established practice, the psychometric properties of these items would be examined by
using confirmatory factor analysis (CFA).

Construct validity

Method

The sample for this CFA was also provided by the platform “Sojump”
(www.sojump.com). Of the sample, 52% were male, and 48% were female. Age
information showed that 25.65% were below 20 years old, 54.36% were between 20
and 30, and the rest were over 30. In all, 528 subjects participated in this study, after
deleting six outliers (e.g., all 12 items score were 5 or 1), 522 valid data remained. All
participants were unaware of the purpose of the study.

Measures

The introduction for the survey was as followed:

*This study wants to assess your imaginative faculty. Listed below are some
characteristics that may describe a person [list of ten traits]. The person with these
characteristics could be you, or it could be someone else. For a moment, visualize
in your mind the kind of person who has these characteristics. Imagine how that
person would think, feel, and act. When you have a clear image of what this person
would be like, answer the following questions (Aquino & Reed, 2002).*

Participants answered the 12 items using a 5-point Likert-type scale (1=strongly
disagree, 5=strongly agree).

Results

(1) Construct validity of the instrument
Mplus 6.0 was used to evaluate the fit of the proposed models (Muthén, 2004). Table 14 shows the comparison between different models. Firstly, the researcher compared the one-factor model (Model 1) with two-factor models to determine whether all the moral identity items can be better represented by a single underlying construct. Table 14 shows that two-factor models fit the data significantly better than one-factor model did. This result confirms the two-component structure that established in Aquino and Reed’s research.

<table>
<thead>
<tr>
<th>Model</th>
<th>Factor</th>
<th>N</th>
<th>$\chi^2$</th>
<th>df</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>1(12)</td>
<td>522</td>
<td>514.61</td>
<td>54</td>
<td>0.80</td>
<td>0.75</td>
<td>0.13</td>
<td>0.08</td>
</tr>
<tr>
<td>Model 2</td>
<td>2(6,6)</td>
<td>522</td>
<td>344.77</td>
<td>53</td>
<td>0.87</td>
<td>0.84</td>
<td>0.10</td>
<td>0.07</td>
</tr>
<tr>
<td>Model 3</td>
<td>2(6,5)</td>
<td>522</td>
<td>222.56</td>
<td>43</td>
<td>0.91</td>
<td>0.89</td>
<td>0.09</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Model 4</strong></td>
<td>2(5,5)</td>
<td>522</td>
<td><strong>157.48</strong></td>
<td>34</td>
<td><strong>0.93</strong></td>
<td><strong>0.91</strong></td>
<td><strong>0.08</strong></td>
<td><strong>0.05</strong></td>
</tr>
<tr>
<td>Model 5</td>
<td>2(5,4)</td>
<td>522</td>
<td>128.43</td>
<td>26</td>
<td>0.94</td>
<td>0.91</td>
<td>0.09</td>
<td>0.05</td>
</tr>
<tr>
<td>Model 6</td>
<td>2(4,4)</td>
<td>522</td>
<td>78.90</td>
<td>19</td>
<td>0.96</td>
<td>0.94</td>
<td>0.08</td>
<td>0.04</td>
</tr>
</tbody>
</table>

The CFA result shows that the two-factor model (Model 2) suggested by Aquino and Reed fit the data well, $\chi^2 (53,522) = 344.77$, CFI=0.87, TLI=0.89, RMSEA=0.10, SRMR=0.07. However, some of the fit statistics failed to reach the recommended levels (Cheung & Rensvold, 2002). In practice, deleting deviating items is the preferred solution when a model fails to achieve the goodness of fit (Gerbing & Anderson, 1988). In this sense, the researcher deleted the items based on their factor loading and compared the two-factor models systematically (seen in Table 15).
Table 15: CFA of moral identity items

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor loading Internalization</th>
<th>Factor loading Symbolization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I strongly desire to have these characteristics.</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>2 <em>I don’t want to have any relationship with this kind of person. (R)</em> (New added)</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>3 It would make me feel good to be a person who has these characteristics.</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>4 Being someone who has these characteristics is an important part of whom I am.</td>
<td>0.63</td>
<td></td>
</tr>
<tr>
<td>5 I would be ashamed to be a person who has these characteristics. (R)</td>
<td>0.61</td>
<td></td>
</tr>
<tr>
<td>6 Having these characteristics is not really important to me. (R)</td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td>7 The fact that I have these characteristics is communicated to others by my membership in certain organizations.</td>
<td></td>
<td>0.74</td>
</tr>
<tr>
<td>8 The types of things I do in my spare time (e.g., hobbies) clearly identify me as having these characteristics.</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>9 I am actively involved in activities that communicate to others that I have these characteristics.</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>9 I often wear clothes that identify me as having these characteristics.</td>
<td></td>
<td>0.56</td>
</tr>
<tr>
<td>10 The types of things I do in my spare time (e.g., hobbies) clearly identify me as having these characteristics.</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>11 The kinds of books and magazines that I read identify me as having these characteristics.</td>
<td>0.64</td>
<td></td>
</tr>
<tr>
<td>12 <em>I’d like to be a friend with someone has these characteristics. (New added)</em></td>
<td>0.49</td>
<td></td>
</tr>
</tbody>
</table>

Model comparison indicated that we could improve fit after deleting item 6 “Having these characteristics is not important to me” measuring Internalization and item 12 “I’d like to be a friend with someone has these characteristics.” measuring Symbolization. The two-factor model with five items in every factor was a satisfying model, and all of the fit statistics were well within acceptable ranges, $\chi^2$ (34,522) =157.48, $CFI=.93$, $TLI=.91$, $RMSEA=.08$, $SRMR=.05$. Compared with Model 4 and Model 5, Model 3 includes more items in the scale. Since long items lead to higher reliability of the instrument, the researcher chose Model 3 as the ideal model.
(2) Reliability of the instrument

The items loading on corresponding internalization or symbolization were combined to form two subscales. The two factors were modestly correlated ($r=0.67$, $p<0.001$), and both showed acceptable internal consistency reliabilities. Cronbach’s $\alpha$ were .81 and .77 for the Symbolization ($M=3.73$, $SD=0.81$) and Internalization ($M=4.16$, $SD=0.84$) scales, respectively.

Item-total score correlations were all positive and statistically significant ($p<.01$), ranging from a low of .43 to a high of .66. This result generally confirmed that the direction of scoring was appropriate, and all items were indispensable to their relative factor.

Study 2A3: Moral Identity and Cheating Behavior

Study 2A2 provides evidence for the construct validity of moral identity. Study 2A3 examines the relationship between moral identity and actual behavioral outcome. The researcher intends to investigate whether identity based on both rule-involved issue and social-concern issue traits can be related to actual moral behavior. As the main argument of the article, moral identity should be related to moral action. Study2A3 employs moral identity to predict people’s cheating behavior when they are provided with an opportunity. The researcher assumes that people who are high in moral identity would be less likely to engage in cheating, even when they are offered with such opportunities as compared with those who are low in moral identity.

Methods

Subjects
This study reports data from 40 adults (25 females, 15 males, 11 from Hong Kong, 29 from Mainland China, ages 18-32, mean age 22.65) with diverse backgrounds. In addition to the data reported, data from three subjects were discarded for solid reasons (One subject was the researcher’s friend. The researcher feared that her data was affected by her relationship with the researcher, and two data were deleted as outliers because their reaction time data were over three standard deviations).

Table 16: Subjects of study 2A3

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hong Kong</td>
<td>8</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Mainland China</td>
<td>7</td>
<td>22</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>25</td>
<td>40</td>
</tr>
</tbody>
</table>

Procedures

To ensure that subjects were not capturing social desirability concerns, the researcher disguised this study as a study about imagination and intuitive ability (as what was used in study 1). Participants were told that they would engage in three unrelated tasks in the study: first, a prior-experiment survey consisted of two questionnaires (one was used to assess participant’s moral identity, the other was EPQ-RSC [Qian, Wu, Zhu, & Zhang, 2000]), which was used to measure each participant’s personality, as well as to reduce their attempt to connect prior moral identity to a later task); then a gambling game that was used in study 1 (used to assess cheating); and finally, a post-experiment survey that consisted of a manipulation check table.

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

Measures

Moral identity: The ten-item instrument developed in study 2A was used to measure this construct (seen in appendix 6). Cronbach’s α reliabilities were .77 and .81 for the Internalization and Symbolization scales, respectively.

Personality: Subjects’ personality traits were measured by the Chinese short version of Eysenck Personality Questionnaire Scale (EPQ-RSC). This scale contains four scales and each included 12 items (seen in appendix 7). Cronbach’s α reliabilities were .67, .88, .80 and .78 for Psychoticism, Nervousness, Extrovert and Lie scales, respectively. The psychometric property of EPQ-RSC indicates that EPQ-RSC is a comparable reliable instrument to test the personality dimensions of Chinese (Qian, Wu, Zhu, & Zhang, 2000).

Cheating behavior: The same procedures developed in study 1 were adapted to measure subject’s cheating behavior.

Manipulation check table. This was a post-experiment survey that consists of several statements about the experiment such as “There was an opportunity to cheat” that subjects were asked to rate the statements using a 5-point scale (1=Do not agree all, 5= Agree very much).

Result

(1)Manipulation checks

The post-experiment survey showed that they agreed to the statements “There was
an opportunity to cheat ($M=4.14$, $SD=0.75$),” “I was not secretly monitored during the task ($M=4.16$, $SD=0.93$).” “My participation was anonymous ($M=4.59$, $SD=0.69$),” and “I was supposed to be honest ($M=4.81$, $SD=0.57$).” This result indicates that participants agreed that they were supposed to be honest in conducting a task that provided an opportunity for obtaining dishonest gain anonymously. They did not quite agree with the statement “The task can gauge people’s intuitive ability in some sense ($M=3.49$, $SD=0.96$).” This indicates the fact that some participants doubted about the purpose of the study. However, this suspicion does not mean that they know the true purpose of this study (Greene & Paxton, 2009). During the debriefing, the researcher asked participants to describe the purpose of this study in their own words. No one said that this experiment was used to assess dishonest behavior. Taken these results together, it was confirmed that subjects were led to believe first, that they had the opportunity for dishonest gain anonymously; second, this defect was an inevitable arrangement of the experiment’s design; and third, they were expected to behave honestly during the task.

(2) Self-report accuracy at recording condition and non-recording condition

As expected, participants reported significantly high level of accuracy at non-recording condition than at recording condition ($M=.65$, $SD=.11$ vs. $M=.51$, $SD=.06$, $t=7.59$, $p<.001$, Cohen’s $d=1.58$). This result identifies the fact that people cheated when they were provided with the opportunity.

Table 17: Means and standard deviations of accuracy between conditions

<table>
<thead>
<tr>
<th>Self-report accuracy</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording</td>
<td>.51</td>
<td>.06</td>
<td>7.59</td>
<td>39</td>
<td>.000</td>
</tr>
<tr>
<td>Non-recording</td>
<td>.65</td>
<td>.11</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(3) Moral identity and cheating behavior

Of the two factors of moral identity, internalization (abbreviated as MI_IN hereinafter) is significantly related with self-report accuracy at non-recording condition ($r=-.44, p<.01$) but not the symbolization (abbreviated as MI_SY hereinafter, $r=-.11, p>.05$). This result supports Aquino and Reed’s (2002) research. In addition, the researcher found that extravert tended to report higher accuracy at non-recording condition ($r=.33, p<.05$).

<table>
<thead>
<tr>
<th></th>
<th>Accuracy</th>
<th>MI_IN</th>
<th>MI_SY</th>
<th>MI</th>
<th>E</th>
<th>P</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Accuracy</td>
<td>.44**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MI_IN</td>
<td></td>
<td></td>
<td>.44**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MI_SY</td>
<td></td>
<td></td>
<td>.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MI</td>
<td></td>
<td>.31</td>
<td></td>
<td>.80**</td>
<td>.89**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>.33*</td>
<td>.02</td>
<td>.33*</td>
<td>.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td></td>
<td>-.07</td>
<td>-.22</td>
<td>-.25</td>
<td>-.28</td>
<td>-.11</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>.01</td>
<td>-.12</td>
<td>-.25</td>
<td>-.23</td>
<td>-.26</td>
<td>.10</td>
</tr>
<tr>
<td>L</td>
<td></td>
<td>.00</td>
<td>.20</td>
<td>.14</td>
<td>.20</td>
<td>.05</td>
<td>.08</td>
</tr>
</tbody>
</table>

Table 18: Correlations among moral identity, personality, and self-reported accuracy

A linear regression was conducted to predicting the self-reported accuracy at non-recording condition. Age, gender, and personality were included as control variables along with the measures of internalization and symbolization as independent variables. The model predicting self-reported accuracy shows that when enter internalization and symbolization, the $R^2$ change is significant ($p<.05$). Concisely, there was a significant negative effect of internalization on the self-report accuracy at non-recording condition. Symbolization had no significant effect on self-report
accuracy. However, it should be meaningful to notice that in study 2A3, the researcher only examined one actual immoral action: cheating for money. More evidence for predictive validity, or called criteria validity, of moral identity is needed when other moral or immoral behavior outcomes are investigated.

### Table 19: Multiple regression analysis on self-report accuracy at non-reporting condition

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>Adjusted R²</th>
<th>R² Change</th>
<th>F Change</th>
<th>Sig. F change</th>
<th>Beta</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First enter</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.28</td>
<td>.03</td>
<td>.08</td>
<td>1.48</td>
<td>.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.19</td>
<td>.27</td>
</tr>
<tr>
<td><strong>Second enter</strong></td>
<td>.44</td>
<td>.03</td>
<td>.11</td>
<td>1.04</td>
<td>.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.32</td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td>P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.20</td>
<td>.21</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.10</td>
<td>.53</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.17</td>
<td>.34</td>
<td></td>
</tr>
<tr>
<td><strong>Third enter</strong></td>
<td>.63</td>
<td>.39</td>
<td>.20</td>
<td>4.55</td>
<td>.02*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MI_IN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.42</td>
<td>.02*</td>
<td></td>
</tr>
<tr>
<td>MI_SY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.14</td>
<td>.46</td>
<td></td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).

**Discussion**

People in different cultures have distinct view of self and this difference can influence their experience of moral values and moral judgment in distinct ways (Markus & Kitayama, 1991). Study 2A investigated moral traits that had the proper activation potential of moral identity in China. Thereafter, the researcher developed a reliable and valid trait-based instrument to measure the moral identity in Chinese context. It is evidenced that the trait-based moral identity can predict cheating behavior after controlling the personality traits and social desirability. The revised moral identity scale can be used for future study in Chinese context.
Study 2B: Moral Identity as a Moderator

In this study, the researcher investigated how the psychological mechanisms underlying honest behavior are affected by an individual’s moral identity. Individuals with high moral identity are conceptualized as people whose moral schemas attain chronic accessibility while individuals with lower moral identity are whose moral identity only achieves temporary accessibility (Aquino et al., 2009; Gino et al., 2011). The researcher expected that for the former, honest behavior results from the absence of temptation and occurs by way of automatic processes (hypothesis 3). For the latter, honest behavior comes from the will power to successfully refrain from temptation and occurs by way of controlled processes (hypothesis 4).

Methods
Subjects
This study reports data from 58 adults (40 females, 18 males, aged 18-32, mean age 23.05) with varied backgrounds (seen in Table 20). Forty subjects were retrieved from study 2A3 and reanalyzed here. It is worthwhile to note that there is gender bias in this sample. In a university with mainly proportion of students are girls, it is not a surprise to find this bias in the sample. The researcher admits that this limitation may have negative impact on some results of this study. He, however, does not think this slight disadvantage would stain the credibility of the general finding of this study. Evidence that supports this claim is that in study 1, there are not gender differences in self-reported accuracy and reaction time in non-recording condition. Since this study would employ the same task in this study, gender bias of the sample would not be a
severe problem. In addition to the data reported, data from one subject’s data were discarded as outliers (outside three standard deviations).

<table>
<thead>
<tr>
<th>Table 20: Subjects of study2B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>Hong Kong</td>
</tr>
<tr>
<td>Mainland China</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Procedures

The procedures in this study were quite similar to the procedures in study 2A3. Participants were led to believe that they were joining an intuitive test that consists of several unrelated tasks. In addition, “Paradigm” was used to record subjects’ reaction time of their behaviors in the experiment.

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

Result

Manipulation checks

All participants completed a post-experiment survey that asked them using a 5-point scale to rate some statements about the experiment (1=Do not agree all, 5=Agree very much, seen in appendix 8). The results show that the participants agreed that “there was an opportunity to cheat ($M=4.16$, $SD=0.64$),” “I’m not secretly
monitored during the task ($M=4.12$, $SD=0.94$),” “My participation was anonymous ($M=4.62$, $SD=0.64$),” and “I was supposed to be honest ($M=4.84$, $SD=0.48$).” These results are consistent with the results in study 2A3 that indicates that participants agreed that they were supposed to behave honestly in a task that provided an opportunity to obtain dishonest gain anonymously. The debriefing result shows that no one realized that the gambling game was used to assess dishonest behavior. Based on these results, it was confirmed that subjects were led to believe first, that they had the opportunity to make dishonest gain anonymously; second, this defect was an inevitable arrangement of the experimental design; and third, they were expected to behave honestly during the task.

No significant difference of accuracy was found in experimental deviations or characteristics of the subjects as in study 1.

**Participants’ self-report performance and reaction time under the different conditions**

As expected, participants reported an extremely high level of accuracy under the non-recording condition than under the recording condition ($M=.64$, $SD=.10$ vs. $M=.51$, $SD=.07$, $t (57) =7.34, p<.001$, Cohen’s $d=1.316$, seen in Table 21). What’s more, there was a longer reaction time in participants under the non-recording condition than under the recording condition ($M=752.85$, $SD=209.43$ vs. $M=675.18$, $SD=206.63$, $t (56) =3.80, p<.001$, Cohen’s $d=0.373$, seen in Table 22). This result confirmed the findings in study 1 that participants would cheat if they had the opportunity. The longer reaction time under the non-recording condition indicates that people spent cognitive resources to get through their moral dilemma.
Table 21: Means and standard deviations of accuracy between conditions

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t</th>
<th>df</th>
<th>p</th>
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<tbody>
<tr>
<td>Recording</td>
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<td>0.07</td>
<td>-7.34</td>
<td>57</td>
<td>.000</td>
</tr>
<tr>
<td>Non-recording</td>
<td>0.64</td>
<td>0.10</td>
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Table 22: Means and standard deviations of Reaction Time (RT) between conditions

<table>
<thead>
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<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording</td>
<td>675.18</td>
<td>206.63</td>
<td>-3.80</td>
<td>56</td>
<td>.004</td>
</tr>
<tr>
<td>Non-recording</td>
<td>752.85</td>
<td>209.43</td>
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Correlations of self-report accuracies and moral identity

Table 23: Correlations of the variables in study 2B

<table>
<thead>
<tr>
<th></th>
<th>MI_IN</th>
<th>MI_SY</th>
<th>RT1</th>
<th>RT2</th>
<th>MI</th>
<th>RMI</th>
<th>Extra</th>
<th>Psy</th>
<th>Neu</th>
<th>Lie</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>-0.34</td>
<td>-0.11</td>
<td>0.08</td>
<td>0.08</td>
<td>-0.30</td>
<td>-0.21</td>
<td>0.33</td>
<td>-0.06</td>
<td>-0.01</td>
<td>-0.02</td>
<td>0.13</td>
</tr>
<tr>
<td>MI_IN</td>
<td>0.37</td>
<td>-0.07</td>
<td>-0.11</td>
<td>0.77</td>
<td>0.57</td>
<td>-0.08</td>
<td>-0.29</td>
<td>-0.13</td>
<td>0.21</td>
<td>-0.14</td>
<td></td>
</tr>
<tr>
<td>MI_SY</td>
<td>-0.06</td>
<td>-0.10</td>
<td>0.88</td>
<td>0.75</td>
<td>0.38</td>
<td>-0.19</td>
<td>-0.21</td>
<td>0.13</td>
<td>-0.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RT1</td>
<td>0.80</td>
<td>-0.08</td>
<td>-0.16</td>
<td>0.00</td>
<td>0.09</td>
<td>-0.13</td>
<td>0.13</td>
<td>-0.15</td>
<td>0.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RT2</td>
<td>0.12</td>
<td>-0.20</td>
<td>0.02</td>
<td>-0.08</td>
<td>0.08</td>
<td>-0.12</td>
<td>0.10</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>MI</td>
<td>0.81</td>
<td>-0.25</td>
<td>-0.21</td>
<td>0.20</td>
<td>0.24</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>RMI</td>
<td>0.22</td>
<td>-0.29</td>
<td>-0.27</td>
<td>0.32</td>
<td>0.28</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Extra</td>
<td>0.07</td>
<td>0.15</td>
<td>0.07</td>
<td>-0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Psy</td>
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<td>0.07</td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Neuro</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.25</td>
<td>0.11</td>
</tr>
<tr>
<td>Lie</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.29</td>
</tr>
</tbody>
</table>

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

(Accuracy=accuracy at non-recording condition; MI=moral identity before the experiment; RMI=moral identity after the experiment; RT1=reaction at recording condition; RT2=reaction at non-recording condition)
Of the two factors of moral identity, MI_IN is significantly related with self-report accuracy under the non-recording condition ($r=-.34$, $p<.05$) but not MI_SY, $r=-.11$, $p=.47$). This result supports Aquino and Reed’s (2002) research. The theoretical rationale for this result might be that, in the present research, what is really important for behavior that measured is not what people believe others think about their morality (measured by the symbolization subscale) but rather that they see themselves as moral (the internalization subscale). The researcher focused the analysis on the internalization subscale thereafter.

**Classify subjects into three groups based on moral identity**

Subjects were classified as belonging to the high moral identity group, median identity group, and low identity group based on their score on MI_IN. It is well-known that the variability of “optimal” cut points has a huge impact on group comparisons. Since it is a small sample study and the data distribution is not normal, the researcher selected the top and bottom 27% of the whole sample as two cut points. After balancing those subjects at the thresholds, 14 subjects (24%) were classified as having low moral identity ($M=3.80$, $SD=.25$), 26 subjects (45%) were classified as having medium moral identity ($M=4.45$, $SD=.17$), and the remaining 18 subjects (31%) were classified as having high moral identity ($M=4.84$, $SD=.09$). These three groups had tremendously significantly different moral identity ($F (2, 55) =147.90$, $p<.001$, partial $\eta^2=0.843$).
Different groups’ self-report accuracy under the different conditions

The researcher used the self-report accuracies as dependent variables and conducted a mixed 2X3 ANOVA with conditions (recording or non-recording as a within-subject factor) and groups (MI_{low} vs. MI_{medium} vs. MI_{high} as a between-subject factor). The correlation analysis shows that the personality trait extravert is related to the self-report accuracy. Based on this consideration, it is reasonable to include this personality trait as control variables in the ANOVA model (seen in Table 24).

Table 24: ANOVA test of different groups’ self-report accuracy under the different conditions

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between-subject effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groups (1,2,3)</td>
<td>.07</td>
<td>2</td>
<td>.03</td>
<td>3.93</td>
<td>.026*</td>
</tr>
<tr>
<td>Error</td>
<td>.44</td>
<td>53</td>
<td>.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Within-subject effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition(recording, non-recording)</td>
<td>.42</td>
<td>1</td>
<td>.42</td>
<td>54.50</td>
<td>.000**</td>
</tr>
<tr>
<td>Groups*condition</td>
<td>.03</td>
<td>2</td>
<td>.01</td>
<td>1.85</td>
<td>.167</td>
</tr>
<tr>
<td>Error</td>
<td>.43</td>
<td>55</td>
<td>.01</td>
<td></td>
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</tr>
</tbody>
</table>
As expected, the main effects of conditions and groups were both very significant. Self-report accuracy was higher under the non-recording condition than under the recording condition \( (F(1, 53) = 54.50, p < .001, \eta^2 = 0.498) \), indicating that all participants cheated when they were provided with the opportunity. However, the main effect of groups was also significant \( (F(2, 53) = 3.93, p = .026, \eta^2 = 0.129) \), which meant participants with high moral identity cheated less even when they had the chance \( (M_{\text{low}} = .70 \text{ vs. } M_{\text{medium}} = .62 \text{ vs. } M_{\text{high}} = .60, \text{see in Fig.4}) \). No interaction was found between conditions and moral identity \( (F(2, 53) = 1.85, p = .167, \eta^2 = 0.063) \).

![Figure 4: Different groups self-report accuracy at recording and non-recording conditions](image)

**Different groups’ reaction time under the different conditions**

Table 25 describes the reaction time of individuals with different moral identity under four different conditions. One-way ANOVA shows that for recording and win trials, recording and loss trials, non-recording and win trials, and non-recording & loss trials, there were no significant differences in reaction time among the different groups.
\( F(2, 55)=.65, \ p=.52, \ \text{partial } \eta^2=0.023; \ F(2, 55)=.89, \ p=.42, \ \text{partial } \eta^2=0.031; \ F(2, 55)=.52, \ p=.59, \ \text{partial } \eta^2=0.019, \ F(2, 54)=1.04, \ p=.36, \ \text{partial } \eta^2=0.037, \) respectively).

As noted in study 1, under the recording loss condition, subjects lost money (honest behavior) and could do nothing to cheat while under the non-recording condition, subjects lost money because they chose not to cheat. If hypothesis 3 is right, then we would see no difference between these two conditions, and if hypothesis 4 is right, then we would expect to see more neural activity of individuals with weak moral identity when they choose to refrain from dishonest behavior under the non-recording condition.

The researcher conducted a mixed 2X3 ANOVA with conditions (recording or non-recording as a within-subject factor) and groups (MI\text{low} vs. MI\text{medium} vs. MI\text{high} as a between-subject factor). Because age is one possible confounding factor that affects reaction time, it was treated as a control variable in the model. A significant groups and conditions interaction were found in this study \( F(2, 54)=3.35, \ p=.043, \ \text{partial } \eta^2=0.110)\).

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Groups</th>
<th>M(SD)RT, ms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording and Win</td>
<td>MI\text{low}</td>
<td>533.08(165.16)</td>
</tr>
<tr>
<td></td>
<td>MI\text{medium}</td>
<td>504.67(156.63)</td>
</tr>
<tr>
<td></td>
<td>MI\text{high}</td>
<td>520.34(157.81)</td>
</tr>
<tr>
<td>Recording and Loss</td>
<td>MI\text{low}</td>
<td>718.33(181.55)</td>
</tr>
<tr>
<td></td>
<td>MI\text{medium}</td>
<td>688.51(257.22)</td>
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<tr>
<td></td>
<td>MI\text{high}</td>
<td>621.53(169.96)</td>
</tr>
<tr>
<td>Non-recording and Win</td>
<td>MI\text{low}</td>
<td>634.66(51.84)</td>
</tr>
<tr>
<td></td>
<td>MI\text{medium}</td>
<td>588.81(291.80)</td>
</tr>
<tr>
<td></td>
<td>MI\text{high}</td>
<td>569.32(105.97)</td>
</tr>
<tr>
<td>Non-recording and Loss</td>
<td>MI\text{low}</td>
<td>926.19(154.29)</td>
</tr>
<tr>
<td></td>
<td>MI\text{medium}</td>
<td>730.42(241.65)</td>
</tr>
<tr>
<td></td>
<td>MI\text{high}</td>
<td>725.49(173.02)</td>
</tr>
</tbody>
</table>
Simple effect analysis showed that for individuals with low moral identity, reaction time was significantly longer under the non-recording condition than under the recording condition ($M=826.36$ vs. $M=693.47$, $F(54)=12.84$, $p<.001$, partial $\eta^2=0.192$, seen in Fig.5). This result supports the hypothesis 4 that indicates that these subjects actively resisted the temptation when forgoing an opportunity for dishonest gain. For the individuals with medium moral identity that were the majority of the sample, there was no significant difference in reaction time between the two conditions ($M=732.81$ vs. $M=707.85$, $F(54)=0.74$, $p=.395$, partial $\eta^2=0.013$). This finding proves that the hypothesis 3 suggests that honest behavior follows from the absence of temptation, implying that there is no need to actively resist temptation. Taking Fig.4 and Fig.5 together, it demonstrated that those subjects with lower moral identity did report higher accuracy under the non-recording condition, and it took more time for them to report a loss under the non-recording condition. This result indicates that in comparison with those who have higher moral identity, it is more difficult for people with lower moral identity to resist temptation and give up the dishonest gain.

Figure 5: Different groups’ reaction time at Recording and Non-recording conditions
One intriguing result that surprised the researcher is that those who had high moral identity also exhibited longer reaction time under the non-recording than recording condition when forgoing dishonest gain and chose to be honest ($M=728.72$ vs. $M=625.36$, $F(54)=8.73$, $p=.005$, partial $\eta^2=0.139$). Neither the hypothesis 3 nor hypothesis 4 explains this phenomenon well. One possible interpretation is that these individuals felt “moral pride” to live up to their inner moral standards in this situation, so they showed a positive response to these events (Greene & Paxton, 2009). This phenomenon suggests that we should combine moral identity study with self-conscious emotion (Tangney, Stuewig, & Mashek, 2007a; 2007b) and do not ignore the affective process of moral behavior in further research (Hoffman, 1990; 2001).

Different groups’ moral identity changed after the experiment

Increasing research has shown that committing moral behavior has huge impact on people’s bodily and mental processes (e.g., Zhong & Liljenquist, 2006). What is the impact of committing moral behavior on moral identity? Would all the individuals’ moral identity change in the same way? Although these two research questions are not quite relevant to the rest part of this research, it is worthwhile to keep in this thesis these analyses that may inspire further study.

The researcher conducted a 3 (Groups: $\text{MI}_{\text{low}}$ vs. $\text{MI}_{\text{medium}}$ vs. $\text{MI}_{\text{high}}$ as a between-subject factor) X 2 (MI: Before experiment vs. After experiment as a within-subject factor) mixed ANOVA to see whether people changed their moral identity after engaging in dishonest behavior.
As we seen from the Table 26, the main effects of groups and experiment were both very significant. All three groups’ moral identity were significant lower after engaging in the moral dilemma ($F(55)=83.42, p<0.001$). More importantly, we found significant groups and experiment interaction here ($F(2, 55) =3.31, p<0.05$). Simple effect analysis show that for individuals with high moral identity, their moral identity decreased more sharply than individuals with low moral identity ($F(55) =51.60, p<0.001$; $F(55) =6.52, p=0.015$; seen in Fig.6). The mechanism underlying this phenomenon needs more research in the future. The researcher proposes that one reason simply is due to the ceiling effect. For the same percentage of score drop, individuals with a high moral identity naturally drop more sharply than the individuals with a low moral identity. Another reason may be that moral identity is a contextually sensitive concept and external stimuli would change people’s self-concept (Nucci, 2004). The construction of personal identity is itself multifaceted, incorporated values and norms from a number of contexts. In a given condition, people vary in their sense of
what means to be moral (Nucci, 2004). In this sense, individuals demonstrate differences in their self-image of how they engage an activity as a moral being. For individuals with high moral identity, they cherish their positive self-image so much that tiny dishonest behavior would dramatically decrease their moral identity (Mazar et al., 2008), while for individuals with low moral identity, they do not appreciate much the moral concern in life. Through a mechanism of self-serving denial, they are capable of maintaining a false moral self-image after committing immoral activity (Moshman, 2004). That is why dishonest behavior seemingly has no function on their moral identity. However, this interpretation needs more evidences in the further studies.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
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<th>Mean square</th>
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<td><strong>Between-subject effect</strong></td>
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<tr>
<td>Groups (1,2,3)</td>
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<td>2</td>
<td>2.92</td>
<td>16.49</td>
<td>.000**</td>
</tr>
<tr>
<td>Error</td>
<td>6.55</td>
<td>55</td>
<td>0.18</td>
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<td></td>
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</tr>
<tr>
<td>Experiment (before, after)</td>
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<td>2.59</td>
<td>83.42</td>
<td>.000**</td>
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<tr>
<td>Groups*Experiment</td>
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<td>0.10</td>
<td>3.31</td>
<td>.048*</td>
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<tr>
<td>Error</td>
<td>1.15</td>
<td>55</td>
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</table>

**Discussion**

Study 2 convincingly confirms the result of study 1 that there are individual differences in neural activities relating to the presence and frequency of dishonest behavior. The behavioral data suggest that individuals with weak moral identity mostly behaved dishonestly and depended on additional controlled cognitive processes to resist temptation. They, however, failed more often than they succeeded. This result
supports the hypothesis 4. Individuals with medium moral identity were more likely to behave honestly and they depended more on the absence of temptation than on the active resistance to temptation. This type of individual, which constituted the majority of the sample in this study, exhibited no additional neural activity when they chose to give up dishonest gain, as compared with the recording condition in which there was no such opportunity. This result is compatible with the hypothesis 3. Based on these results, it is possible to integrate the dual-process model within the framework of social-cognitive view (Lapsley & Narvaez, 2004; Aquino et al., 2009). Individuals whose moral constructs are chronically accessible are more likely to achieve “moral grace” when construing social events. Their moral compass automatically leads them through their moral dilemma while for individuals whose moral schema is not easily accessible; they consume cognitive resources to calculate the external reward using an inner standard and rely on willpower to overcome the temptation when choosing to be honest.

Although unethical behavior is common, people usually behave honestly automatically when confronted with dishonest gain. Cultures and social norms have made honest behavior a natural instinct. Being dishonest, which violates our natural instincts, needs more cognitive effort, thus more reaction time. Stimuli that increase people’s accessibility to moral constructs lead to more moral behavior unconsciously. Moral identity plays an important role in inhibiting dishonest behavior. Individuals with weak moral identity rely on their willpower to resist temptation and forgo dishonest gain. By contrast, individuals with strong moral identity exhibit honesty
without actively resisting temptation. Though individuals with weak moral identity attempt to resist temptation and behave with “limited honesty”, they fail more often than they succeed.
Chapter 5 Study 3: An Integrated Approach to Everyday Moral Behavior

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 & Wheeler, 1996; Kant & Gregor, 1996). According to dual-process model, the intuitive process is often related with deontological thinking, heuristics, automaticity, and emotion. The reflective process is often related with utilitarian thinking, deliberateness, control, and the rejection of emotion (Kahneman, 2003, 2011; Greene, 2007). Some theorists argue that consequentialism is a more appropriate framework when making moral decisions since deontology is usually moral shortcut and commits moral errors (see reviews in Baron & Ritov, 2009; Sunstein, 2005). Recently, however, Bartels and Pizarro (2011) found that those individuals who are least prone to committing moral errors also possess a set of psychological characteristics, such as having higher scores on a measure of antisocial personality traits, which many would consider prototypically immoral. Study 3 shows that, however, in “everyday morality,” the deontological thinking is not necessarily an error-prone and biased approach in morality. Study 3A was a survey study that aimed to test hypothesis 5 that moral identity is positively related with preference for deontology. Study 3B attempted to explore the integrated effect of moral identity and moral judgment on moral behavior in
an experimental study. Overall, this research aims to deepen our understanding of the perception of “who am I,” reasoning of “what is right and wrong,” and how these two factors interact together to shape moral behavior.

**Study 3A: A Survey on Moral Identity and Moral Judgment**

**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. Twenty-three percent (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 by using a vignette as follows:

*One furniture manufacturer employed workers to produce chairs. 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 (see the Chinese version in appendix 9).

The question is if you were the manufacturer, who would be your partner? State one of your main reasons.

The researcher 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 the researcher reduced the competing responses to one salient preference by asking them to provide the most important reason. Of the entire 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 researcher 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: The revised version of Aquino and Reed’s (2002) internalization and symbolization scales in study 2A was used to measure this construct. Cronbach’s $\alpha$ reliabilities were .70 and .79 for the internalization and symbolization scales, respectively.

Control

This was a survey study, and it is recognized that social desirability bias could strongly influence the responses of the participants. With this in mind, the researcher 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, French, & Keogh, 1998). The researcher 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, Wu, Zhu, & Zhang, 2000). Gender and age were also included 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 27 shows the means, standard deviations, and correlations of moral identity and the EPQ Lie.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Age</td>
<td>28.91</td>
<td>7.876</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.EPQ Lie</td>
<td>9.038</td>
<td>2.978</td>
<td>-.230**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.Internalization</td>
<td>4.293</td>
<td>.637</td>
<td>.101*</td>
<td>-.169**</td>
<td></td>
</tr>
<tr>
<td>4.Symbolization</td>
<td>3.838</td>
<td>.596</td>
<td>.064</td>
<td>-.320**</td>
<td>.204**</td>
</tr>
</tbody>
</table>

Note: N=423. * p <.05. ** p <.01, two-tailed.

To test hypothesis 5, the researcher conducted a binary logic regression model analysis with ethical predisposition as the dependent variable. Preference for deontology was selected as the reference category and investigated this model in three stages. First, the model entered the age and gender; second, entered the EPQ Lie responses, and finally, entered 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 27 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 28). These results support the 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.

Table 28: The logic regression of moral identity on moral consequentialism and formalism

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model1 B</th>
<th>Model2 B</th>
<th>Model3 B</th>
<th>SE</th>
<th>Wald (df=1)</th>
<th>sig.</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.408</td>
<td>-0.692</td>
<td>1.129</td>
<td>1.236</td>
<td>.835 .361</td>
<td>.943</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.129</td>
<td>-0.075</td>
<td>-0.059</td>
<td>.095</td>
<td>.380 .537</td>
<td>.943</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-0.243</td>
<td>-0.184</td>
<td>-0.112</td>
<td>.213</td>
<td>.273 .601</td>
<td>.894</td>
<td></td>
</tr>
<tr>
<td>Lie</td>
<td>0.086*</td>
<td>.088*</td>
<td>.038</td>
<td>5.225</td>
<td>.022 .1091</td>
<td>1.091</td>
<td></td>
</tr>
<tr>
<td>Internalization</td>
<td>-.593**</td>
<td>.166</td>
<td>12.795</td>
<td>.000</td>
<td>.553</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symbolization</td>
<td>.141</td>
<td>.188</td>
<td>.560</td>
<td>.454</td>
<td>1.151</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. N=423 for all models. Unstandardized regression coefficients are shown. Male=0, female=1; Consequentialism=1, formalism=0; * p<.05. ** p<.01, two-tailed.

Discussion

The results of study 3A identify the relationship between moral identity and moral judgment. The researcher 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 & 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 & Ceranic, 2007).

**Study 3B: An Experimental Study of Moral Identity, Moral Judgment, and Everyday Moral Behavior**

Study 3B tested the hypothesis that moral identity and moral judgment will interact together to shape moral behavior. For individuals that 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.

**Method**

**Subjects**

The researcher posted the recruitment on the campus as well as on his Facebook wall. Data were reported from 50 adults (30 females, 20 males, age 19~35, mean age 23.52). All the participants had well-educated backgrounds. Nineteen of them were from Hong Kong, thirty of them from mainland China, and one participant was from Malaysia.

**Measures**

Moral identity: The researcher measured moral identity by using the internalization scales developing in study 2A. The sample was divided 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 a strong moral identity group, and the rest (25) was a weak moral identity group.

Moral judgment: The vignette created in study 1 was employed to measure
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: Cheating behavior was measured by the same task used in study 1 and study 2.

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 5-point scale (1= Do not agree at all, 5= Agree very much, seen in appendix 8).

Procedures

Participants were led to believe that they were joining an intuitive test that 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 3A. Then they needed to read the vignette, which measured their moral judgment. After that, they were instructed to finish the intuitive test on a computer.

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

Result

The manipulation table with a 5-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 the manipulation was successful as what of previous two studies.

As expected, participants reported a significantly high level of accuracy under the non-recording condition than under the recording condition \((M=0.63, SD=0.14 \text{ vs. } M=0.54, SD=0.09, t(49)=4.97, p<.001, \text{Cohen’s } d=0.777)\). 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, it is safely claimed that the inflation of accuracy indicated participants’ dishonest behaviors. These results were consistent with the previous two studies.

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 the relationship between moral identity and moral judgment was significant \((\chi^2(1)=11.54, p=.001)\). The results confirm the finding in study 3A that individuals who preferred utilitarian ideals usually had weak moral identity. In contrast, individuals that depended on the deontological framework were more likely to have strong moral identity. Furthermore, compared to the individuals that preferred utilitarian ideals, the individuals that preferred the deontological solution had significantly fast reaction time under the non-recording condition \((M=722.40,\)
This result provides evidence that deontologists make decisions from automatic processes so that it is relatively fast while utilitarian adherents make decisions from controlled processes, which requires additional time.

Table 29 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. It is interesting to notice that these individuals also reported an accuracy of .10 percent higher than the expected value of .50. The result indicates that if there is an opportunity for dishonest gain, though these honest would control themselves a bit, they would more or less commit dishonest behavior. We should never expect to see an absolute moral person, provided that he or she has a tremendous opportunity to do evil.

Table 29: Cheating behavior among different groups

<table>
<thead>
<tr>
<th>Moral judgment</th>
<th>Moral identity</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Utilitarianism</td>
<td>18</td>
<td>.61</td>
<td>.14</td>
</tr>
<tr>
<td>Deontology</td>
<td>7</td>
<td>.74</td>
<td>.12</td>
</tr>
</tbody>
</table>

The researcher chose self-reported accuracy under the non-recording condition as the dependent variable and conducted a MANOVA with moral identity and ethic predispositions as two independent variables. As noted from Table 30, the main effects of ethic predisposition and moral identity on cheating behavior were both not
significant.

Table 30: A MANOVA test result: the effect of moral judgment and moral identity on cheating behavior.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within Cells</td>
<td>.85</td>
<td>46</td>
<td>.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moral judgment</td>
<td>.00</td>
<td>1</td>
<td>.00</td>
<td>.19</td>
<td>.663</td>
</tr>
<tr>
<td>Moral identity</td>
<td>.01</td>
<td>1</td>
<td>.01</td>
<td>.65</td>
<td>.424</td>
</tr>
<tr>
<td>Moral identity × Moral judgment</td>
<td>.11</td>
<td>1</td>
<td>.11</td>
<td>5.95</td>
<td>.019*</td>
</tr>
<tr>
<td>Model</td>
<td>.13</td>
<td>3</td>
<td>.04</td>
<td>2.30</td>
<td>.090</td>
</tr>
<tr>
<td>Total</td>
<td>.98</td>
<td>49</td>
<td>.02</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Preferences for deontology or utilitarianism did not necessary lead to more moral behavior. However, the researcher did find a significant interaction between ethic predisposition and moral identity ($F (1, 46) =5.95, p=0.019$, 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 figure 7. With regard to the individuals who preferred to a utilitarian framework, no matter whether their moral identity was strong or weak, 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 weak ($F (1, 46) =5.63, p=.022$, partial $\eta^2=0.109$). This result supports the argument that moral identity and moral judgment act together to shape moral behavior.
Discussion

The results of study 3B provide additional evidence about the relationships between moral identity, moral judgment, and moral behavior. Individuals that preferred utilitarian ideals usually had weak moral identity, while individuals that preferred the deontological framework were more likely to have strong moral identity. More importantly, 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. 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 3B justifies the effort of an integrated approach to moral behavior.
Chapter 6 General Discussion

A recap of this dissertation at this moment may be necessary. This research investigated the automatic processes and controlled processes that lead to everyday moral behavior and demonstrated the importance of individuals’ moral identity. In study 1, the researcher found that the automatic processes of honest behavior operate at an unconscious level. The automatic processes are more likely the cognitive basis that behind everyday moral behavior. This claim is partially right because cultures and social norms have made everyday behavior a natural instinct. Being dishonest, which violates our instincts, needs more cognitive effort and hence requires more reaction time. What’s more, an honesty-related story increased people’s accessibility to moral constructs and led to significantly more honest behavior. This result suggests that we do not pay enough attention to our intrinsic moral standards when we are facing moral dilemma. Before testing moral identity, the researcher also has noticed the cultural difference and developed a revised version of moral identity that is suitable in Chinese contexts. Study 2 investigated the psychological mechanisms that lead to honest behavior among different people. The researcher identified the crucial role of moral identity in inhibiting dishonest behavior. Individuals with low moral identity relied on their willpower to resist temptation and forgo dishonest gain. By contrast, individuals with high moral identity exhibited honesty without active resistance to temptation. Though individuals with low moral identity attempted to resist the temptation and behaved with “limited honesty”, they failed more often than they succeeded. This fact
highlights the importance of moral identity. Study 3 first established a relationship between moral identity and moral judgment. After that, the researcher demonstrated how moral judgment can interact with moral identity to determine moral behavior. Individuals with strong moral identity were likely to depend on the deontological framework when making a moral judgment, while individuals with weak moral identity preferred utilitarian ideals when making a moral decision. More interesting is that, when it comes to predicting moral behavior, moral identity only matters when people have a preference to deontological ideals, not utilitarian framework. Deontological ideals need to integrate with strong moral identity that leads to more moral behavior. However, regardless of individuals’ moral identity, strong or weak, if they prefer a utilitarian solution, the behavior is not significantly different. 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. Generally speaking, these results confirm the necessity to incorporate moral identity and moral judgment in studying moral behavior.

**Theoretical implication**

First, 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 & Ceranic, 2007). In the current literature, virtue ethics, deontology and utilitarianism are three foundational theories in studying moral
decision-making and moral behavior. Depending on the specific nature of moral issues, scholars with different tastes prefer different one or two theories to build their research framework. More recently, Melé (2012) proposed that it was necessary to unite all three theories involving duties, consequence, and virtues into a single approach that he labeled as “Triple Font of Morality”. According to this approach, decisions are moral sound in terms of the duty for the person who is acting, the means used to attain that duty, and the consequences and any situational factors. To the researcher’s knowledge, this thesis is one of the earliest response to Melé’s propose of “Triple Font of Morality”. The present research has demonstrated that it is possible to conceptualize a model that builds on all the three foundational ethical theories. Moral identity is basically related to virtue ethics and dual-process model represents the important role of both deontology and utilitarianism played in moral decision making. This thesis is an early attempt to unite all the three foundational theories and this effort contribute to the theoretical thinking of morality.

Second, the ultimate question of morality is how to increase our ability to predict moral behavior. We expect morality to guide our actions at any situation, at any time. As a researcher, our mission is to find out the antecedents of moral behavior and increase our predictive efficiency. Figure 8 describes the antecedents of moral behavior based on previous studies. As what can be seen from figure 8, moral behavior can be explained from how a moral agent processes information of the moral issues. The information processing includes both cognitive processing and affective processing. Piaget and Kohlberg focus on the moral reasoning or reflection alone and claim that the
sophistication of moral reasoning can predict moral behavior. However, there are more antecedents than just moral reasoning in morality. Empirical data shows that the correlations between moral stages and behavior are often moderately low. Hoffman argues that moral reasoning itself does not necessarily lead to moral behavior and empathy may play a significant role in a comprehensive moral theory. Haidt carries forward Hoffman’s theory and presents his social intuitionist model as an alternative to cognitive development model. Other than predicting behavior from the information processing perspective, some stable predispositions such as one’s personality, moral identity or ethical predispositions will also impinge on one’s behavior in a given situation. For example, people of an agreeable trait are expected to be more helpful and kind to others (Paunonen & Ashton, 2001). Furthermore, a number of theoretical and empirical studies, including the present study, find that moral identity is a good predictor of one’s commitment to moral action (Aquino et al., 2009; Blasi, 1980; 1984; 2004; Shao et al., 2008). Moral identity also intertwines with other individual factors such as ethical predispositions to predict moral behavior. We are not living in a vacuum. Other than one’s stable predispositions, our behavior is also shaped and determined by the surrounding environment. As what the interactionists, like Trevino and Bandura, suggest, behavior is a function of interaction between person and situation (Bandura, 1991; 2001; Trevino, 1986). The bystander effect vividly illustrates how the perceived surrounding factors change one’s moral behavior (Darley & Latane, 1968). Other than individual factors and situational ingredients, moral issue itself, such as the moral intensity, will affect moral behavior (Jones, 1991). Many people are likely to lift a
finger when needed; however, it takes a hero to provide a life-cost altruistic behavior. Overall, due to the complexity of moral behavior, we should take an integrated approach to study moral behavior, and do not forget the whole picture when we intend to explain one’s behavior.

![Diagram of Antecedents of Moral Behavior]

*integrated in the present study

In addition, the interaction effect between moral identity and moral judgment in the present research also delimitate the complexity of moral behavior. The research initially argued that compared with the ethical adherents of utilitarianism, who focused on the outcome of behavior, deontologists 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 that they would practice what they know. This result is an echo to the literature on moral hypocrisy (e.g., Batson, Thompson, Seuferling, Whitney, & Strongman, 1999; Batson & Thompson, 2001; Batson, Thompson, & Chen, 2002). It is noteworthy that the inherent structure of the vignette and the experiment are quite similar. 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 & Denton, 2005). 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 utilitarians with a strong moral identity would demonstrate the most utilitarian way, while deontologists with a strong moral identity would follow the most deontological manner. In study 3, the researcher 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 Ceramic’s (2007) research. The other reason is possibly that this result was based on a relatively small sample. Though the data show the trend that when utilitarians were motivated with a strong moral identity, they would cheat more, the result did not reach a 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 & Ceramic, 2007). A moral agent under a moral dilemma is like a man driving a car in the sense that moral identity acts like a accelerator that provides the power, while the moral judgment acts like a steering wheel that controls the direction. The person needs both the power and the direction so that he can successfully go through a moral dilemma and arrive at the morally right place.

Third, the present study extends dual-process model to everyday moral behavior. The modern literature of dual-process model is mostly dealing with facts and elementary logic (e.g., Kahneman & Tversky, 1974; Tversky & Kahneman, 1986; 1992). But the relevant literature of dual-process model in moral and political domains has just begun (Greene, 2007; Rand et al., 2012; Sunstein, 2005). The reason for this phenomenon is partially that it is hard to find unambiguous agreement in moral and political domains in which people could demonstrate that intuition sometimes leads to errors. Scholars exploring moral decisions from a dual-process perspective solve this problem by largely focusing 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 often
lead to undesirable results (e.g., Greene et al., 2001). Other 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 weak, 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 that have strong moral identity have practiced the moral scripts and principles numerous times, those deontological rules and values used by them constitute a worldview, also called world model, which serves as a tool for a decision process (Custers & Aarts, 2010; Pugh, 1977). Individuals need this model of the environment to evaluate the consequences of alternatives. This world model is indeed well-suited, and in most of time, functions well. 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 evolulational 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. For individuals who have a 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 & 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.

Four, the present research highlights the important role of culture in morality. People in different cultures have a distinct view of self, and this difference can influence their experience of moral values and moral judgment in distinct ways (Markus & Kitayama, 1991). People in Western culture have an independent self and
are supposed to be concern more about rule issues while people in Eastern culture hold an interdependent self and are more likely to emphasize social concern issues. What is more, when considering moral judgment, the Western culture tends to take a cognitive perspective while the Eastern culture, such as the Confucian model, tends to take an affective perspective (Ma, 1988). These cultural differences indicate that when we want to know the structure of Chinese moral identity, we cannot ignore the characteristic of the Chinese culture. The moral stimuli chosen from Western culture might not be located at the central of one’s moral identity so might not have the proper activation potential. Activation potential is defined as to what extent a construct can be activated or activates other relevant schemas. Construct with higher activation potentials will be more likely to impinge on individual’s judgment and behavior (Higgins, 1996). One purpose of this study was to find out those moral traits that have the highest activation potential in Chinese context. And these moral traits serve as moral stimuli that would trigger a large pool of moral traits that the Chinese would use to define a moral person. Based on these moral traits, the researcher refined Aquino and Reed’s (2002) moral identity scale and linked this moral identity to moral behavior in the Chinese context. China is a setting that helps people to incorporate both cognitive and affective perspectives when making a moral judgment (Ma, 1988; 2009). Although many theories and research have described the relationship between moral identity and moral behavior, however, a few, if not none, empirical research has investigated this relationship in Chinese context from a social cognitive perspective. Chinese people cherish moral traits differently from their Western correspondents. Though some moral
traits are universal all over the world, traditional Confucian value system still has an immense impact on the Chinese’s perception about being a moral person. Some Confucius traits, such as filialness and loyalty, are considered essential to be a moral person (Hwang, 1999). The present study supports the notion that moral identity based on these readily accessible moral traits is a promising concept that helps to bridge the judgment-action gap. One contribution of this dissertation is to investigate moral traits cherished by Chinese people as well as to develop a reliable, valid and easily administered method, which could be used for evoking and measuring moral identity in Chinese context. The present dissertation also contributes to the understanding of moral values in countries of different levels of modernization. The findings indicate that rule-based moral values in Mainland China converge to the higher standard of her Hong Kong counterparts as modernization in China intensifies. At the same time, Mainland China people still hold a higher acceptability of traditional Confucius value that concerns interpersonal need.

Five, this research adds to the growing body of empirical research on moral identity. The studies demonstrated that individuals with different moral identity respond differently to a moral dilemma. Individuals with high moral identity have easy accessibility to moral schemas in relation to an ambiguous social event so they behave honestly automatically. Individuals with low moral identity, however, though at some moment attempt to behave honestly, rely on their willpower to resist temptation, and they fail more often than they succeed. The study not only increases our understanding of the possibility that much of our everyday moral behavior is automatic (Bargh &
Ferguson, 2000; Haidt, 2001), but also contributes to knowledge about the different psychological mechanisms that lead to moral behavior. Furthermore, the findings in the study highlight the relationship between moral behavior and payoff. In Glaucon’s mind, external factors like reputation and confinement explain the entire thing. Morality is just a desire to maintain one’s reputation for virtue, or a fear of the punishment. From this perspective, people carry out moral behavior deliberatively by trading off the expected external benefits against costs of the immoral behavior (Sandmo, 2005). Hence, if that sanction or reputation is removed, one’s moral character would evaporate since it has no instrumental value anymore. From this angle, people would consider three aspects when they come across an opportunity to get dishonest gain: the expected amount of gain taken from the dishonest act, the probability of being caught, and the magnitude of punishment if caught in this act (Mazar et al., 2008). Thus, within this frame, people are moral or immoral only to the extent that the planned trade-off favors a particular action (Hechter, 1990; 1993). However, the findings in the present research indicate that morality itself is worthwhile as what the sages claimed. It is possible that being moral is an instinct need that one would pursue the goal of being moral at the cost of somewhat external reward. Every society has its cherished core values. After many years of socialization and internalization, the norms and values of the society serve as an internal benchmark against which people compare their behaviors. These internalized norms and values become one’s moral compass that points out what is a right and moral behavior. Compliance with the internal value system provides positive rewards (i.e., sense of pride), whereas noncompliance leads to negative rewards (i.e.,
sense of shame). Whether an external stimulus is counted as a “temptation” partially depends on to what extent one value the moral standard in his or her mind. If one has a high moral identity and usually puts moral concern in front of other concerns, the internal positive reward is enough to maintain a moral behavior (e.g., Mazar et al., 2008). Individuals with high moral identity automatically behave morally when faced an immoral benefit after years of moral character-training. This finding indicates that educator should help students to form the moral identity and highlight the positive internal reward in moral education.

In regards to the construct of moral identity, results confirmed the two components of internalization and symbolization aspects of moral identity, which had emerged in Aquino and Reed’s (2002) research. The stability of these dimensions was tested across samples, suggesting that the public–private distinction is a valid theoretical property of moral identity. However, the data shows that only internalization predicted the actual immoral behavior, whereas, the symbolization dimension was only strongly related with the personality dimension of extrovert. One possibility of interpretation of the pattern is that the internalization dimension seems to reflect self-importance of moral characters, and the symbolization appears to convey the information to the world as to whether one has these moral traits (Aquino & Reed, 2002). The relationship between symbolization and extrovert was significant own up to the reason that extrovert people usually are more sociable and have a higher propensity to impress people around (Pilkonis, 1977; Vrij & Winkel, 1992). Symbolization was not significantly related to cheating behavior since the researcher measured it unobtrusively, and participants
thought that they were anonymous in the task. Reynolds and Ceramic (2007) argued that an internalized moral identity seems consistent with traditional concepts of acting morally, whereas symbolization does not. This research sheds light on the understanding of the mechanisms underlying people’s moral identity that influence their perceptions and actions.

Six, this research sheds light on the controlling role of willpower in moral functioning. Willpower is definitely necessary to deal with internal and external obstacles when pursuing long-term goals. Without self-control, people would be overwhelmed by the inner responses, short-term urges or preexisting patterns. However, we should not expect too much from it and rely solely on it. As what were found in this research, individuals who were tempted by the dishonest gain but still wanted to be honest, they needed additional cognitive control to resist the temptation and inhibit their dishonest response. However, they were more likely to cheat than successfully forgo the dishonest gain. This result indicates that we cannot solely rely on our willpower to resist temptation and, therefore, commit less unethical behavior (Gino et al., 2011). Recently, a finite pool of resources and moral muscle are two common metaphors for willpower (e.g. Baumeister & Heatherton, 1996; Bazerman & Tenbrunsel, 2011; Muraven & Baumeister, 2000). Limited pool of resources would be exhausted and depleted after draining, while moral muscle may be tired and weary after exercising. These two metaphors both indicate that strength of self-control is a limited resource so that if a situation demands too much resource, the self-control is frequently impaired. What’s more, just as a muscle needs rest after exercise, self-control needs
refreshing after consuming; otherwise individuals will be too tired to resist unethical behavior (Gino et al., 2011).

Seven, this dissertation also demonstrates that moral schemas are readily primed and easily activated constructs that are sensitive to stimulus in the surroundings (Lapsley & Narvaez, 2004; Aquino et al., 2009). The level of dishonesty significantly dropped when a stimulus increased the accessibility to moral constructs. Goal representations of being a moral person unconsciously cause people to be more honest (Aarts, Custers, & Marien, 2008; Custers & Aarts, 2010). The fact that people are sensitive to contextual stimulus related to self-concept and a simple reminder of moral identity increases honest behavior implies that people do not generally pay enough attention to their moral identity. This result partly explains why we fail to do what’s right and seems hypocritical (Bazerman & Tenbrunsel, 2011). More importantly, the result also indicates that we are expected to see more moral behavior if we have created just-community/institutional contexts (Power, 2004). Though we do not know exactly how these unconscious stimuli flexibly control moral behavior here, the present study contributes to the increasing literature about automatic and unconscious behavior.

Last but not least, this research contributes to knowledge of the complexity of human nature. On one hand, many people, at least, at the same moment, achieve the moral grace to forgo dishonest gain automatically. On the other hand, if they perceive that they are not going to be caught, people tend to cheat. Findings in this research came from university students and white-collar employees from different industries. These people are supposed to be the hard core of our society. The prevalence of dishonesty
among these people suggests the generalizability of the results, and we should never expect to see complete honesty if we provide people with an opportunity to cheat.

**Practical implication**

From a practical and educational perspective, the findings provide some insights regarding how to improve moral behavior in daily life.

First, this dissertation has considerable implication on child rearing. If the aim of the parents is to foster new generation of high morality, they need to pay more attention to children’s moral identity. Findings in this study found that a moral behavior can be predicted by the intent to which people integrate moral concerns into their theories and descriptions of self. Other than moral judgment or reflection alone, parents should help their child to form a moral sense of self, and put moral concern ahead of other concerns, such as monetary concern or reputation. Developmentalists have the conclusion that identity forms during adolescence (Erikson, 1980; 1994). At this stage, parents should be good moral exemplars and promote adolescent self-identification with a coherent set of moral standards. If parents seize this “critical period” of identity formation process, we can be optimistic to see a new generation of moral people.

Second, this research also has sight on business ethics. In the dissertation, the research emphasizes on the concept of accessibility. If a moral schema is accessible, then a moral behavior can be expected to follow. It is believed that people have an intrinsic motivation toward morality and if they can access the moral schemas in mind, they will strive hard to follow the moral scripts. Managers and organizations should try
to create a harmonious and dignified environment that helps people to have easy access to moral schemas. For example, the working rules and regulations should be explicit, concrete, rigid, and simple. People should be reminded frequently and perhaps daily of the morality to maintain the accessibility to moral schemas. Managers can create an organizational setting of moral stimulus to facilitate moral behavior. The findings manifest that we are more likely to exhibit moral behavior if the environment provides appropriate reminders that increase the accessibility to moral identity. This fact implies that whenever we face tasks that afford opportunities to cheat, we may benefit if there are reminders existing or we are mindful at that moment. In addition, organizations would benefit from programs training moral characters (e.g., fairness, care and honesty). Managers can encourage and reward the development of moral identity within employees. Such efforts are expected to have moral benefits in the organizations. The present research also indicates that if organizations employ individuals with high moral identity, to the same extent, moral behavior is expected to accompany them (Reynolds & Ceranic, 2007).

Third, this research has important implication on moral education. During the last two decades, scholars realized that teaching ethics involves developing students’ moral character as well as their moral reasoning (Bridgman, 2010; Trevino, 1992). While much has been written on character education programs, comparatively little empirical work has been done evaluating their successes and failures (Matsuba, Murzyn, & Hart, 2011). Moral values and moral personality are the core dimensions for discussions about “character education”. The area of moral identity, self, and personality is
considered a valuable option for framing the understanding of people’s character development (Narvaez & Lapsley, 2008). One of the major aims of education is to foster the development of a high stage of morality in our next generation (Ma, 2012). The teaching of ethics and social responsibility in business schools does not appear to draw more significant attention from researchers and educators in recent years. Even more alarming is that more and more business students are involved in antisocial behavior (Nicholson & DeMoss, 2009). The findings of the present study indicated clearly that people tend to cheat if they perceive that they are not being caught. The results also showed that the relation between moral identity and cheating behavior was significantly negative. That is, the better one’s moral identity is, the less one will cheat. The educational implication is that teaching ethics in business school should not focus mainly on business ethics such as corporate responsibility, economic ethics, and corruption in business (Rossouw, 2011). Instead, it should emphasize on the teaching of a more generic scope of ethics and justice. The objective of business ethics education is to foster the development of moral character and moral identity in our students. The best and the most practical ways to promote ethical competence in business students are therefore not to construct a teaching package focusing solely on ethical competence. Instead, a comprehensive and all-round positive development program with a clear ethical basis is a better choice (Ma, 2012). In other words, a curriculum of ethics and justice should relate the development of ethics, social responsibility, and justice with cognitive development, emotional development, social and citizenship development, and personality development. The ultimate aim in the teaching of ethics in business
school is to help our students to develop the highest stage of moral development, which includes the development of universal justice, love, and self-actualization with a global vision and a deep caring for the disadvantaged in the world (Ma, 1988, 1992, 2009).

Finally, the study also shed light on the impotent role of law and how the whole society runs morally. Institutional constraints are more important than moral self-discipline. Rather than eulogizing citizens who exhibit self-control in dilemmas, the government and the society should focus on removing temptations and reducing the likelihood that their citizens will have opportunities to cheat. In a society that intends to deter dishonesty, much effort has been disproportionately paid to find out the “bad apple” who is supported to commit unethical behavior as a result of character flaws. The findings from this research suggest that even if people care about morality, if they are provided with a chance to cheat the cost is small (e.g. the task is anonymous). In organizations, government officers or company managers should pay much attention to this kind of unethical behavior committed by “good apples”, for example, ordinary employees taking office pens or paper home.

**Limitation and direction for future study**

There are several limitations of the present research that call for cautious interpretation and further study.

First, though the findings in three empirical studies partially validate the integrated framework depicted in Figure 2, some of the links in this diagram are quite arbitrary and are subjected to further studies. The present thesis has demonstrated that
there are interaction between ethical predispositions and moral identity. Furthermore, in order to behave morally when facing temptation, individuals with strong moral identity depend more on intuitive process while individuals with weak moral identity rely more on reflective process. However, there are still lots of works to refine the proposed framework. For example, the present research does not address whether individuals with weak moral identity would prefer to utilitarianism, much less does it investigate how ethical predispositions are related with dual process model.

Second, in the thesis, the author tried to develop an instrument for measuring Chinese people’s moral identity based on ten moral traits without any distinction. The researcher can argue that the Exploratory Factor Analysis of the ten traits only found one factor emerged rather than two factors. In addition, the spreading activation theory indicates that these ten traits may interconnect like the nods in a network, activating one concept would spread out energies in the network and activate related concepts (Anderson, 1983). Since these ten moral traits intertwine together, it is impossible, and not necessary to divide them into two separate categories. It is justified to merge the rule-based traits and social concern traits for measuring moral identity in the present research. However, a lot of research makes clear that Chinese people are very concerned about “violating family ethics” (e.g., Hwang, 2011). It would be interesting to separate these moral traits into two categories, namely, rule-base and social concern traits, and then explore the distinctions between the moral identities triggered by each category respectively. It is expected that Chinese people would be more sensitive to the moral identity triggered by social concern traits. And this specified moral identity
would be more powerful to predict social behaviors, such as altruism, cooperation or other prosocial behaviors.

Third, in study 1, the researcher employed an honest-related story (appendix 4) to prime subject’s moral concepts and the results indicate that if a moral schema is accessible, then a moral behavior can be expected to follow. It is noteworthy to know that honest behaviors lead to positive results in that story. The actor in that story gained enormous reward after being honest. One can argue that it is the metaphor of “being honest and being rewarded “in the story, rather than the accessibility of honest schema, leads subjects to be honest in the experiment. The present design cannot provide any appropriate answer to this argument. Actually, in reality, the phenomenon of “being honest and then being punished” is more common than that “being honest and then being rewarded”. It is more important and also intersecting to manipulate the consequence of the honest behavior, and investigate subject’s behavior after priming by a “being honest and then being punished” story. The conclusion would be more robust if we carry out this sort of study in the future.

Four, reaction time data are often used to identify the involvement of additional cognitive processing in task performance. However, reaction time data only roughly depict the neural activity. For example, they cannot distinguish whether the additional processing time comes from cognitive control or affective response. We cannot explain well why individuals with high moral identity exhibited additional reaction time when they chose to be honest. Though we suggest that this phenomenon may arise from their self-conscious emotion like pride (Tangney et al., 2007a; Tracy & Robins, 2004), this
hypothesis needs to be tested by innovative neuroimaging technology like fMRI or EEG (Electroencephalography).

Five, the main design of the studies was an experimental study and all the three studies were conducted in a laboratory setting. It is unknown whether the findings are an ecologically valid conclusion in real community/institutional contexts. For example, in reality, the rewards of dishonest behavior are always enormous. It is reasonable to figure out at some point, when the external rewards become extraordinarily high, that a behavior would largely be influenced by material benefit rather than by one’s moral identity. By taking advantage of random assignment and manipulation, the relationship between moral identity and dishonest behavior was validated in this study. However, due to the resources limitation, the sample size is relatively small. Future research could benefit from testing the same relationships using different methodological approaches and recruiting larger samples.

Six, the present dissertation focused on only one typical everyday moral behavior—cheat and employed the same type of task to assess the behavior. As what is discussed earlier, there is moral ambiguity regarding cheating behavior, and reasoning from deontology and utilitarianism lead 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. Deontologists recognized both harm and the violation of a behavioral norm as indicators of the moral issue, whereas utilitarianism adherents responded only to harm. Cheating behavior is a moral issue that
only violated behavioral norms. Cheating as a moral issue is what deontologists are sensitive to, not the utilitarianism adherents. This partly explains the reason that 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. By using different tasks to measure cheating and other types of every moral behavior, future research may strengthen the results here.

Last but not least, this research has established a link between moral identity and moral behavior. However, this finding does not mean that moral psychology should move to this area at the expense of existing knowledge about cognitive development theory (e.g., Kohlberg, 1969). Rather than the traditional practice of measuring moral judgment by moral developmental stage (e.g., Rest & Barnett, 1986), the present research conceptualized moral judgment as the ethical predisposition. Measuring moral judgment by ethical predisposition is a worthy try; however, 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, 1969; Rest & Barnett, 1986). Future study could benefit from investigating the same relationships tested here by integrating moral identity with moral judgment, and reaffirm the value of a cognitive development approach to moral behavior (Reynolds & Ceranic, 2007).
Chapter 7 Conclusion

Although unethical behavior is common, people usually behave honestly automatically when confronted with dishonest gain. Cultures and social norms have made honest behavior a natural instinct. Being dishonest, which violates our natural instincts, needs more cognitive effort, thus more reaction time. Stimuli that increase people’s accessibility to moral constructs lead to more moral behavior unconsciously.

Moral identity plays an important role in inhibiting dishonest behavior. Individuals with low moral identity rely on their willpower to resist temptation and forgo dishonest gain. By contrast, individuals with high moral identity exhibit honesty without actively resisting temptation. Though individuals with a low moral identity attempt to resist temptation and behave with “limited honesty,” they fail more often than they succeed.

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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Appendix 1: General features of dual process model

<table>
<thead>
<tr>
<th>The intuitive system</th>
<th>The reasoning system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast and effortless</td>
<td>Slow and effortful</td>
</tr>
<tr>
<td>Process is unintentional and runs automatically</td>
<td>Process is intentional and controllable</td>
</tr>
<tr>
<td>Process is inaccessible; only results enter awareness</td>
<td>Process is consciously accessible and viewable</td>
</tr>
<tr>
<td>Does not demand attentional resources</td>
<td>Demands attentional resources, which are limited</td>
</tr>
<tr>
<td>Parallel distributed processing</td>
<td>Serial processing</td>
</tr>
<tr>
<td>Pattern matching; thought is metaphorical, holistic</td>
<td>Symbol manipulation; thought is truth preserving, analytical</td>
</tr>
<tr>
<td>Common to all mammals</td>
<td>Unique to humans over age 2 and perhaps some language-trained apes</td>
</tr>
<tr>
<td>Context dependent</td>
<td>Context independent</td>
</tr>
<tr>
<td>Platform dependent (depends on the brain and body that houses it)</td>
<td>Platform independent (the process can be transported to any rule following organism or machine)</td>
</tr>
</tbody>
</table>

This figure is directly extracted from (Haidt, 2001).
Appendix 2: Recruitment notice

I am a PH.D student in HKBU. Currently, I am conducting a social cognitive experiment which needs to recruit participants. The whole task takes about 50 minutes.

The experiment site: Shaw Campus, AAB, 844.

The experiment time: flexible at next two weeks. Interested friends please not hesitate to connect me for more information and register in advance.

Your cost: 50 minutes in our study

Your harvest: 1, 40 $~ 400 $ HKD reward
            2, a wonderful academic experience
            3, deeply understanding of yourself

Requirement: Right-handed; Over sophomore

Phone Number: 0852-6375655
E-mail: 11466278@life.hkbu.edu.hk
contact: Rex
Appendix 3: Subject Instructions

[English Version]

Subject Instructions

The following instructions were presented to subjects on a computer:

Intuition Thinking (Intuitive Thinking) Test

Intuitive Thinking is a thinking form or sense that doesn’t use rational processes such as facts or data. When intuitive thinking functions, you just get a holistic understanding of the essence of thing by automatic cognitive process and make a rapid judgment. Intuition thinking not only plays an extremely important role at the creative thinking activity but also gain increasing attention in modern business world. Quickly changing world required people depending more on intuitive thinking to make judgments without enough information. Research shows that intuition thinking can be trained and improved. The purpose of this study is to investigate peoples’ intuition thinking, and base a solid foundation for subsequent cultivation and training. Since the following test is relatively complex, make sure that you read this instruction carefully.

Press the “space bar” to continue.

In this study, your job is to predict the outcome of the dice number, “big” represents dice number 4, 5, 6, and “small” represents dice number 1, 2, 3. The dice number appears in a prior defined rule, you need to use your intuitive thinking to figure out this rule, and forecast dice number is “big” or “small” at every trial. You may not think that you have the ability to do this, and never mind. Just try your best. You may be surprised at the result.

Press the “space bar” to continue.

It is said that people’s intuitive ability would be disrupted if they have to record their prediction in advance. The worry to be evaluated by other people may distract their intuitive ability. To test this idea, in this study, in one condition, which we call it “Recording Condition”, you are ask to input your prediction “big” ( press F key) or “small” (press J key) in advance, so the computer would record and know your prediction first. In the other condition, which we call “Non-recording Condition”, you only need to make the prediction of the “big” or “small” by heart, and then press the “space bar” to continue, so the computer don’t know your prediction in advance. No matter in “Record Condition” or “Non-recording Condition”, you both need to
remember your previous forecast was “big” or “small”. It is noteworthy to point out that in “Non-recording Condition”, you need to clearly remember your prediction in your heart since the computer does not record your previous prediction.

Press the “space bar” to continue.

Then you will see the dice rolling in the screen and the outcome of the dice number, including 1, 2, 3, and 4, 5, 6. After that, you will see a screen that says “CORRECT or Not?” At that point you must indicate whether or not your prediction was correct as soon as possible (within 3 seconds). Please press “F” key to indicate that you were right and “J” key to indicate that you were incorrect. If you were right, you will gain the score, otherwise, you will lose the score. The computer will keep track of all of your wins and losses based on your self-report result. If you failed to form a prediction before the outcome of the dice point was revealed, then you should indicate that your prediction was incorrect. Remind you again that in “Non-recording Condition”, whether or not your prediction was correct depends only on the prediction you made in your mind and the outcome of dice point.

Press the “space bar” to continue.

Some scholars suggested that people make more accurate predictions when they are highly motivated to predict accurately. To test this assumption, we will be providing you with varying levels of financial incentive at every prediction. When the dice point is “big”, if you are correct, you will win the same score as the dice point (e.g. the dice point is 6, and your prediction is right, then you will gain 6 score), if you are incorrect, you will lose 2 score (because that means your previous prediction was “small”, you will suffer loss of the average of 1, 2, 3, which is 2). Otherwise, when the dice point is “small”, if you are correct, you will also will the same score as the dice point, may be 1,2, or 3, but you are incorrect, you will lose 5 score (because that means your previous prediction was “big”, you will suffer loss of the average of 4, 5, 6, which is 5)

<table>
<thead>
<tr>
<th>Dice</th>
<th>Prediction is correct</th>
<th>Prediction is incorrect</th>
<th>Dice</th>
<th>Prediction is correct</th>
<th>Prediction is incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Win1</td>
<td>Lose 5</td>
<td>4</td>
<td>Win 4</td>
<td>Lose 2</td>
</tr>
<tr>
<td>Smaller 2</td>
<td>Win2</td>
<td>Lose 5</td>
<td>Big 5</td>
<td>Win 5</td>
<td>Lose 2</td>
</tr>
<tr>
<td>3</td>
<td>Win3</td>
<td>Lose 5</td>
<td>6</td>
<td>Win 6</td>
<td>Lose 2</td>
</tr>
</tbody>
</table>

Press the space bar” to continue.

When your prediction is “big”, your gain and lose both will be at high level; when your prediction is “small”, your win and suffer both will be at low level. The computer will keep track of all of your wins and losses. One score is equal to 1 HKD. Every score
means real money that you would be paid based on your performance. If, at the end of the experiment, your score total is less than 40, you will be paid at least 40 HKD, and if your score is larger than 40, you will be paid that amount. However, your winnings cannot exceed 400 HKD.

Press the “space bar” to continue.

You will make a total of 144 predictions. You will do these in 4 groups of 36 trials. There will be 5 seconds between the end of one trial and the beginning of the next one. After you finished 2 groups, you will have a chance to rest. The whole task will take a little less than 40 min.

Press the “space bar” to continue.

Remember that there are two conditions in our experiment: “Recording Condition” and “Non-recording Condition”. In recording condition, you need to press “F” key or “J” key first, while in “Non-recording condition”, you just make your prediction privately to yourself, and press the “space bar” key to continue. Then will comes the rolling dice and outcome of the dice point. At the next screen, you will see the word “Correct or Not”, at that point, you indicate whether the prediction you made in your mind was correct. Press the “F” key if your prediction was correct or the “J” key if your prediction was incorrect. The computer will tell you how much money you won or lost on that trail. In order to make you be familiar with the procedures, now you have the chance to practice. Your performance at practice would not affect your money win finally. You have the right to quit at any time during the experiment, if you quit, you will gain 5 HKD, thank you for cooperation.

Press the “space bar” to begin practicing
【Chinese version】

直覺思維測驗

直覺思維（Intuitive Thinking）是指不受固定的邏輯規則約束而直覺領悟事物本質的一種思維形式，是對問題未經逐步分析，僅依據內心的感知迅速做出判斷、猜想、設想。直覺思維不僅在創造性思維活動中起著極為重要的作用，而且在現代瞬息萬變的商業社會中也有廣泛運用。研究表明直覺思維是完全可以有意識地加以訓練和培養的。本研究的目的是考察個體的直覺思維，為後續的培養和開發做準備。因為本實驗的程式較為複雜，請您務必認真閱讀以下指導語！

請按“空白鍵”繼續。

在這個測試中，您的任務是預測骰子的大小，“大”代表點數 4、5、6，“小”代表點數 1、2、3。骰子點數的出現具有某種規律，您需要運用您的直覺思維去理解這種規律，並預測骰子的“大”或“小”。您可能沒有想過您擁有這種預測能力，沒有關係，您只要儘量做到最好，最後的結果可能您自己都不敢相信。

請按“空白鍵”繼續。

有研究者認為如果人們的預測結果需要提前公開，那麼因為擔心被人評價，他們的直覺能力將會受到幹擾。為了檢驗這個觀點，在本研究中，我們分為兩種
情境：

第一種情境下需要您預先輸入您的預測，“大”（F 鍵）或“小”（J 鍵），這種情況稱為“記錄”情況。

第二種情境下您只需要把預測的“大”或“小”記在心中，想好後按下“空白鍵”，電腦會自動跳到下一屏，這種情況稱為“非記錄”情境。

不管是“記錄”情境還是“非記錄”情境，您都要清楚記住自己原先所的預測是“大”或“小”。特別提醒下，“非記錄”情況下，電腦並不記錄您的預測，所以更需要您自己把“大”或“小”記在心上。

請按”空白鍵”繼續。

接著您會看到骰子的點數（骰子最上面的那個數）：1、2、3、4、5、6。然後您會看到熒幕上顯示“正確與否？”這個時候您必須儘快回答您剛才的預測是正確的還是錯誤的。請按 “F”鍵代表預測“正確”，“J”鍵代表預測“錯誤”。系統會根據您自我報告的結果給予相應的分值。每次預測，您要是報告預測對了骰子的大小，您就可以得分，要是預測錯了，您會被扣分。提醒下您，假如在規定時間（3 秒）內，您沒有對“正確與否？”做出判斷，那麼就意味著您默認自己之前的預測是錯誤的。

請按“空白鍵”繼續。

有研究表明當人們越積極主動去預測未來，他們的預測結果就越準確。為了
檢驗這個結論，我們會對不同的預測點數給予不同的分值。當骰子出現 “大” 的點數 N 時，如果預測對了，您就可以獲得 N 分；如果預測錯了，您會被扣除 2 分（因為此時說明您之前的預測為 “小”，則扣除 “小” 點數 1、2、3 的均分 2 分）。當骰子出現 “小” 的點數 N 時，如果預測對了，您就可以獲得 N 分；如果預測錯了，您會被扣除 5 分（因為此時說明您之前的預測為 “大”，則扣除 “大” 點數 4、5、6 的均分 5 分）。

<table>
<thead>
<tr>
<th>骰子</th>
<th>判斷正確</th>
<th>判斷錯誤</th>
<th>骰子</th>
<th>判斷正確</th>
<th>判斷錯誤</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>得 1 分</td>
<td>扣 5 分</td>
<td>4</td>
<td>得 4 分</td>
<td>扣 2 分</td>
</tr>
<tr>
<td>小</td>
<td>得 2 分</td>
<td>扣 5 分</td>
<td>大</td>
<td>得 5 分</td>
<td>扣 2 分</td>
</tr>
<tr>
<td>3</td>
<td>得 3 分</td>
<td>扣 5 分</td>
<td>6</td>
<td>得 6 分</td>
<td>扣 2 分</td>
</tr>
</tbody>
</table>

您預測 “大” 時，可能的報酬和損失都大；您預測 “小” 時，可能的報酬和損失都小。請注意，這裡的分值是可以轉化為實實在在的錢，1 分為 1 塊錢，如果您最後得分為 50 分，則可以兌換為 50 塊元錢，上限為 400 元錢，下限為 40 元錢（作為感謝您參加這個研究的基本報酬）。整個預測任務結束後，電腦會給出您最後的得分。

請按 “空白鍵” 繼續。

您總共需要做 144 次預測，總共分 4 組，每組 36 個。每個預測間有 5 秒間隔，中間可以選擇休息，整個測試大概需要 40 分鐘。

如果您理解了本實驗的程式，請按 “空白鍵” 繼續。
請您記住，本實驗分為兩種情境：“記錄”情境與“非記錄”情境。同時根據您所預測“大”“小”的正確性給予不同的報酬或懲罰，每次預測都需要您做出自己的判斷。為了讓你熟悉整個實驗程式，現在您有機會練習下。（練習階段的得分對您最後的結果沒有任何影響）在“記錄”情境下，您需要輸入您的預測（“大”或“小”）；在“非記錄”情境下，您只需要把預測的“大”或“小”記在心上，然後按“空白鍵”，電腦就自動跳到下一屏。然後，您會看到骰子的大小。假如您認為自己的預測正確，則按“F”鍵代表“正確”，假如您認為自己的預測錯誤，則按“J”鍵代表“錯誤”。電腦最後會告訴您在直覺能力測驗中的整體表現。（請您儘量完成整個實驗，若是中途退出則只能得到5塊錢，謝謝您的配合。）

請按“空白鍵”開始練習。
Appendix 4: Honest-related Story

晏殊的故事

北宋時期著名的文學家和政治家晏殊，14歲被地方官作為“神童”推薦給朝廷。他本來可以不參加科舉考試便能得到官職，但他沒有這樣做，而是毅然參加了考試。事情十分湊巧，那次的考試題目是他曾經做過的，得到過好幾位名師的指點。這樣，他不費力氣就從千多名考生中脫穎而出，並得到了皇帝的讚賞。但晏殊並沒有因此而洋洋自得，相反他在接受皇帝的複試時，把情況如實地告訴了皇帝，並要求另出題目，當堂考他。皇帝與大臣們商議後出了一道難度更大的題目，讓晏殊當堂作文。結果，他的文章又得到了皇帝的誇獎。

晏殊當官後，每日辦完公事，總是回到家裡閉門讀書。後來皇帝瞭解到這個情況，十分高興，就點名讓他做了太子手下的官員。當晏殊去向皇帝謝恩時，皇帝又稱讚他能夠閉門苦讀。晏殊卻說：“我不是不想去宴飲遊樂，只是因為家貧無錢，才不去參加。我是有愧於皇上的誇獎的。”皇帝又稱讚他既有真實才學，又質樸誠實，是個難得的人才，過了幾年便把他提拔上來，讓他當了宰相。

晏殊受到皇帝的賞識和重用的故事說明(一句話)：
Appendix 5: Dice

The dice used in the study.
Appendix 6: Moral Identity Scale

想像能力問卷

下面是一些我們描述他人特點時可能用的詞彙:

可信的，負責的，孝順的，善良的，公正的，
誠實的，真實的，尊重的，廉潔的，助人的。

一個具有這些特質的人可以是你，也可以是另外的其他某個人。請您在心中形成具有這些特質的某個人的形象，然後想像下這個人的思想感情以及行為表現。當您心中形成這樣一個人的清晰形象後，請您回答下面的幾個問題。這些問題都是5點計分，1代表非常不同意，5代表非常同意。請根據你的實際情況在符合的選項上打”√”。

<table>
<thead>
<tr>
<th>項目</th>
<th>題目</th>
<th>非常不同意</th>
<th>不太同意</th>
<th>不確定</th>
<th>有點同意</th>
<th>非常同意</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>能夠成為具有這樣的人讓我自我感覺很好。</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>這些特點是決定“我是誰”的一個重要方面。</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>我閱讀的書刊雜誌表明我具有這些特質。</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>擁有這些特質讓我覺得很羞愧。</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>在閒置時間我做的事情（比如業餘愛好）清楚地表明我具有這些特點。</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>我積極參加一些能表現我具有這些特質的活動。</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>我經常穿一些表現這些特質的衣服。</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>我非常希望我能擁有這些特點。</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>我參加過的團體（組織）表明我具有這些特點。</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>我不喜歡跟這樣的人往來。</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 7: Chinese version of EPQ-R Short Scale

請回答下列問題。回答“是”時，就在“是”上打“√”；回答“否”時就在“否”上打“×”。每個答語無所謂正確與錯誤，請儘快回答，不要在每道題目上花太多時間思索。回答時不要考慮應該怎樣，只回答你平時是怎樣的。每題都要回答。

<table>
<thead>
<tr>
<th>項目</th>
<th>是</th>
<th>否</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>你的情緒是否時起時落？</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>當你看到小孩（或動物）受折磨時是否感到難受？</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>你是否健談的人嗎？</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>如果你說了要做什麼事，是否不論此事是否順利你都能遵守諾言？</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>你是否會無言無故地感到“很慘”？</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>欠債會使你感到憂慮嗎？</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>你是個生氣勃勃的人嗎？</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>你是否會偷圖過超過你應得的分外之物？</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>你是個容易被激怒的人嗎？</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>你會服用能產生奇異或危險效果的藥物嗎？</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>你願意認識陌生人嗎？</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>你是否曾經有過明知自己做錯了事卻責備別人的情況？</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>你的情感容易受傷害嗎？</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>你是否願意按照自己的方式行事，而不願意按照規則辦事？</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>在熱鬧的聚會中你能使自己放得開，使自己玩得開心嗎？</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>你所有的習慣是否都是好的？</td>
<td>1</td>
</tr>
<tr>
<td>17</td>
<td>是否時常感到“極其厭倦”？</td>
<td>1</td>
</tr>
<tr>
<td>18</td>
<td>良好的舉止和整潔對你來說很重要嗎？</td>
<td>1</td>
</tr>
<tr>
<td>19</td>
<td>在結交新朋友時，你經常是積極主動的嗎？</td>
<td>1</td>
</tr>
<tr>
<td>20</td>
<td>你是否有過隨口罵人的時候？</td>
<td>1</td>
</tr>
<tr>
<td>21</td>
<td>你認為自己是一個膽怯不安的人嗎？</td>
<td>1</td>
</tr>
<tr>
<td>22</td>
<td>你是否認為婚姻是不妥時宜的，應該廢除？</td>
<td>1</td>
</tr>
<tr>
<td>23</td>
<td>你是否很容易地給一個沉悶的聚會注入活力？</td>
<td>1</td>
</tr>
<tr>
<td>24</td>
<td>你是否曾經有過明知自己做錯了事卻責備別人的情況？</td>
<td>1</td>
</tr>
<tr>
<td>25</td>
<td>你是否覺得人們為了未來有保障，而在儲蓄和保險方面花費的時間太多了？</td>
<td>1</td>
</tr>
<tr>
<td>26</td>
<td>你是否喜歡和人們相處在一起？</td>
<td>1</td>
</tr>
<tr>
<td>27</td>
<td>當你還是個小孩子的時候，你是否曾有過對父母耍賴或不聽話的行為？</td>
<td>1</td>
</tr>
<tr>
<td>28</td>
<td>在經歷了一次令人難堪的事之後，你是否會為此煩惱很久？</td>
<td>1</td>
</tr>
<tr>
<td>題目</td>
<td>是</td>
<td>否</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>35 你是否努力使自己對人不粗魯？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>36 你是否喜歡在自己周圍有許多熱鬧和令人興奮的事情？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>37 你曾在玩遊戲時作弊過嗎？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>38 你是否因自己的“神經過敏”而感到痛苦？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>39 你願意別人怕你嗎？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>40 你曾利用過別人嗎？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>41 你是否喜歡說笑話和談論有趣的事？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>42 你是否時常感到孤獨？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>43 你是否認為遵循社會規範比按照個人方式行事更好一些？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>44 在別人眼裡你總是充滿活力的嗎？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>45 你總能做到言行一致嗎？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>46 你是否時常被負疚感所困擾？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>47 你有時將今天該做的事情拖到明天去做嗎？</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>48 你能否使一個聚會順利進行下去嗎？</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
### Appendix 8: Manipulation Check Table

研究過程調查表

下面是一些針對研究過程的簡單論述，請您回答下面的幾個問題。這些問題都是 5 點計分，1 代表非常不同意，5 代表非常同意。請根據你的實際情況在符合的選項上打”√”。

<table>
<thead>
<tr>
<th>項目</th>
<th>非常不同意</th>
<th>不太同意</th>
<th>不確定</th>
<th>有點同意</th>
<th>非常同意</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>這個實驗設計在某種程度上確實能考察人的直覺能力。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>我在實驗過程中的表現要比大多數人的表現更好。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>這個設計存在不成熟的地方，人們有機會可以作假。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>我相信在實驗過程中沒人偷偷監控我。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>我相信整個實驗過程是匿名的。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>大部份人的得分應該都比我高。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>即使有人因為作假被發現了也不會有什麼損失。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>儘管沒有要求，在整個實驗過程中我也應該誠實作答。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>在實驗過程中的有些部份我並沒有認真作答。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>在不記錄條件下，即使我作假電腦也不會知道。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

### 想象能力問卷

下面是一些我們描述他人特點時可能用的詞彙：

可信的，負責的，孝順的，善良的，公正的，
誠實的，真實的，尊重的，廉潔的，助人的。

一個具有這些特質的人可以是你，也可以是另外的其他某個人。請您在心中形成具有這些特質的某個人的形象，然後想像下這個人的思想感情以及行為表現。當您在心中形成這樣一個的清晰形象後，請您回答下下面的幾個問題。這些問題都是5點計分，1代表非常不同意，5代表非常同意。請根據你的實際情況在符合的選項上打”√”。

<table>
<thead>
<tr>
<th>項目</th>
<th>非常不同意</th>
<th>不太同意</th>
<th>不確定</th>
<th>有點同意</th>
<th>非常同意</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>我不喜歡跟這樣的人往來。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>我非常希望我能擁有這些特點。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

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<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>我經常穿一些表現這些特點的衣服。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>我閱讀的書刊雜誌表明我具有這些特點。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>我積極參加一些能表現我具有這些特質的活動。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>這些特點是決定“我是誰”的一個重要方面。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>我參加過的團體（組織）表明我具有這些特點。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>這個特點使我自我感覺很好。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
請認真閱讀以下文章，並回答問題:

數年前有一名傢俱製造商雇用一批年輕人，以手工來製造椅子。商人依據每人製作出來的椅子數量，每週付款一次，但有一個條件：每一張椅子要在合格檢驗後，工人才能取得應獲的工資。這名製造商非常留意其中兩名青年人——小徐及小何。這兩個人每週都分別造出很多好的椅子，而且很少有不合格的情形。隨著時光的流轉，製造商需要找一位監工來幫他開展業務。他想到了要從這兩人——小徐及小何——之中選出一位來擔任。因為這兩人的能力相差無幾，製造商也不知道到底選誰比較合適。為了進一步考驗這兩人，這名製造商想出這樣一個法子：它將所有工人召集起來，並宣佈為了趕工，只要椅子造好了，不必管是否通過檢驗，它都計件付酬。這個新的規則宣佈後，椅子的產量大大的增加了，但相對的椅子的不合格率也增加了。這時，製造商特別去檢查小徐及小何所做的椅子。結果，小徐所做的椅子之品質跟往常一樣的好，但小何在新政策下做的椅子卻有一半不合格。

假如您是那名製造商，你選誰晉升到監工的職務上去呢？小徐還是小何？

請簡要說明下您的理由（儘量用一句話表達清楚）：

Appendix 9: Business vignette
CURRICULUM VITAE

Academic qualification of the thesis authors, Mr. XU Zhixing:

• Received the degree of Bachelor of Arts from Central South University, China, July 2007

• Received the degree of MPhil of Developmental Psychology from Beijing Normal University, China, July 2011

July 2014