DESCRIBING AND TESTING A MEASURE OF CONFUCIAN SELF:

A PRELIMINARY VALIDITY STUDY

by

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A DISSERTATION

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ABSTRACT

This study attempted to describe Confucian ethics by presenting its conceptual structures and comparing it with Western ethics, and to develop and test a measure of the Confucian self. The theoretical foundations for Confucian ethics and the Confucian self were formulated from the theoretical domains of Confucian philosophy, Western philosophy, and moral psychology.

The study consisted of two phases. Phase one focused on pilot studies in which the psychometric properties of the Confucian self-measure were assessed with 43 Chinese undergraduate students’ responses to surveys for identifying Confucian traits as priming items and evaluating contents of the instrument of the Confucian self. Phase two concentrated on formal studies in which nomological and predictive validities of the Confucian self-measure were examined, through testing its relationships with other moral constructs, including moral judgment, moral behavioral tendencies, and attitudes toward behavioral outcomes. The sample consisted of 380 Chinese and 250 American undergraduate students.

The data revealed that the Confucian self was perceived as one unit (rather than the twofold one as defined in the literature) and equally described self-development for the contemporary young people regardless of nationality and Chinese regions. The findings provided evidence that the Confucian self independently influenced moral behavioral tendencies and attitudes toward behavioral outcomes across cultures. The American group demonstrated a stronger relationship between the Confucian self and moral behavioral
tendencies than the Chinese group. Moral judgment demonstrated a stronger relationship with attitudes toward behavioral outcomes only for the Americans. For the Chinese subgroups (rural-town and urban cohorts), there were no significant relationships among the Confucian self, moral judgment, and moral behavioral tendencies and attitudes toward behavioral outcomes.

Overall, this research provided evidence that supports the existence of the Confucian self as a moral construct. It demonstrated a good reliability and validity of the Confucian self-instrument and produced evidence of the relationships among the Confucian self, moral judgment, moral behavioral tendencies and attitudes toward behavioral outcomes. Implications, limitations, and future work were discussed as well.
DEDICATION

To my parents, for your love and support in my life!
LIST OF ABBREVIATIONS AND SYMBOLS

\( \alpha \) Cronbach’s index of internal consistency

\( df \) Degree of freedom: number of values free to vary after certain restrictions are applied within the data

\( F \) Fisher’s F ratio of two variances

\( GFI \) Computed value of Goodness-of-fit (an index of model fit between the hypothesized model and the observed covariance matrix)

\( M \) Mean: the sum of a set of measurements divided by the number of measurements in the set

\( \eta^2 \) Computed value of effect size

\( N \) Population size

\( p \) Possibility associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than observed value

\( SRMR \) Computed value of Standardized Root Mean Residual

\( r \) Pearson product-moment correlation

\( RMSEA \) Computed value of Root Mean Square Error of Approximation

\( t \) Computed value of t test

\( T \) Computed value of regressive relationship in structural equation modeling model

\( \chi^2 \) Computed value of Chi-square

\( Z \) Computed value of Ztest

< Less than

= Equal to
× Times (multiplication)

$\Delta df$ Computed value of difference between two degrees of freedom

$\Delta \chi^2$ Computed value of difference between two Chi-squares
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CHAPTER ONE

INTRODUCTION

Moral behavior is an important issue in human society, and what causes acceptable behavior attracts the attention of both researchers and practitioners. In the past thirty years, much research has focused on the cognitive-developmental model and the importance of moral reasoning in behavioral outcomes (e.g., Derryberry & Thoma, 2005; Kohlberg, 1969; Rest, et al., 1999a). Such a model views that one’s understandings of and reference to essential epistemic knowledge, such as rights, duty, social norms and reciprocity (Crowson, DeBacker, & Thoma, 2007; Rest et al., 1999a; Rest, Narvaez, Thoma, & Bebeau, 2000), and the capacity to produce sophisticated reasoning about that knowledge are crucial in human moral decision-making (Kohlberg, 1969; Rest, et al., 1999a). Indeed, prior empirical studies (e.g., Bebeau, 1994; Bartek, et al., 1993; Derryberry & Thoma, 2005; Kuther & Higgins-D'Alessandro, 2000; Reynolds & Ceranic, 2007; Stams, et al., 2006) have provided evidence supporting the cognitive-development paradigm that regards moral reasoning as an imperative role in moral outcomes.

Inspired by abundant theoretical and empirical research in Western society, Eastern psychologists have explored the pattern of moral reasoning in their cultures when an ethical crisis emerges in business (Chan, 2008; Chow & Ding, 2002; Tsui & Windsor, 2001; Wimalasiri, 2001). For instance, cross-cultural studies (e.g., Ma, 1988; Wong & Au, 2000) found that Chinese people are likely to prefer a strategy for solving moral dilemmas that is
different from most Westerners strategies. Instead, Chinese people appear to be more relationship-oriented. Accordingly, some scholars (e.g., Dien, 1982; Ma, 1996; Lin & Ho, 2009; Shafer, Fukukawa, & Lee, 2007) argue that the cognitive-developmental model may be insufficient for effective human resources management in multinational business organizations in China.

Furthermore, a leading Western historian, Fairbank (1980, pp. 12) described that “China did not develop a doctrine of civil liberties and individual rights in the same way as the modern West,” yet Chinese people have developed a “profound moral sense of justice and proper conduct inherited from Confucianism.” At this point, one may question how moral concepts or principles, such as human rights, human dignity, and freedom, which underlie Western measures, could be reflected among Chinese people, if they do not develop such concepts (Chan, 2008; Dien, 1982; Ip, 2009; Ma, 1996; Wong & Au, 2000). If assessments based on Western ethical concepts may not exactly capture Chinese ethical code, this problem gives rise to another question; that is, what would be an appropriate way to understand Chinese people’s ethics and their pattern of moral development. Thus, there is a need to explore the most influential ethical system in China — Confucian ethics.

The research purpose of current study aims to describe Confucian ethics by presenting its conceptual structures and comparing it with Western ethics. The area of cultural differences between Confucian ethics and Western ethics is wide and sophisticated (Waldmann, 2000). This study does not attempt to give a comprehensive picture and comparison between these two ethics. Instead, it portrays core moral concepts of Confucian ethics (e.g., ren) and analyze its difference from moral concepts in Western ethics (e.g., human right, freedom).
Confucian ethics has a long tradition and has permeated throughout all facets of life. It has socialized Chinese people to develop ways of daily activities and a sense of individual’s obligation and boundary (Dien, 1982; Fairbank, 1980). Essential to Confucian ethics is ren—an essential moral concept in Confucian ethics. Confucians believe that a person of ren is a sage, who reaches the loftiest standard of moral ideal (Chan, 1969; Tu, 1985; Wong, 2012) and is harmonious with the cosmos (Ames, 1983; Chan, 1969; Fung, 1962; Tu, 1985; Yao, 1996).

Unlike Westerners who seek universal sharable principles to protect every individual for basic human rights, freedom, and social justice, Confucian ethics places stress on perfection of the self by cultivating ren person (ren ren, 仁人) via human relationships in daily activities and developing self-knowledge (Chan, 1969; Fung, 1962; Tu, 1984a, 1985; Yao, 2000). The boundary between Western ethics and Confucian ethics is their own spirit: the former highlights the doubt and rational analysis, whereas the latter remarks sincerity and practical daily activities (Yao, 2000). Pursuit of sagehood (Confucian self or self-perfection) is the primary concern in Confucian ethics (Chong, 2003; Lai, 2003; Tu, 1985; Yao, 1996; Wong, 1998, 2012).

Confucian self is “an ethical concept and its significance for Confucian doctrine lies in a process of cultivating one’s moral character that can be completed only in one’s engagement in social and righteous causes” (Yao, 1996, pp. 190). Confucian self represents the ultimate concern for moral life and spiritual idealism, which are absent in the Western culture (Fang & Li, 1995, in Yao, 2000). The contemporary Western perspective views that moral self refers to a set of moral traits (Aquino & Reed II, 2002) and “reflects individual differences in the extent to which being moral is a central or essential characteristic of the sense of self” (Hardy
& Carlo, 2005, pp.235). Confucian self, however, does not only entail the domain of moral self in the Western perspective, but also indicates self-cultivation is a continuous process that perfects the self and directs one to be a sage. Typically, according to Tu (1984a; 1985; 1994), Confucian self is twofold: broadening of the self (expanding human relatedness) and deepening of the self (deepening self-knowledge). This is because Confucians believe that social contexts and others are the grounds for one to become a sage and Confucian self cannot be fully completed unless one commits himself/herself to Confucian principles, implements these principles in daily activities, and reaches the sublime of self-knowledge of Confucian Tao at large. Daily activities are the departure and the return that one becomes moral (Hall & Ames, 1987; Tu, 1985; Yao, 1996). However, it does not mean that Confucian self is limited to expanding human network of relationships. Rather, through enlarging human relatedness, human nature is cultivated and nurtured (Lai, 2003; Tu, 1984a, 1985; Yao, 1996); one’s social scope is extended, and then one transcends a small self into a great self. At this point, Confucian self, in the current study, refers to an ongoing dynamic process that opens the self to expanding human relations and allows one to develop self-knowledge of ren (Tu, 1984a, 1985, 1994). It is the path that makes human search of ren (self-perfection) possible under Confucian principles.

Since such aspects of the Confucian self (breadth and depth of the self) are rarely captured in the Western rational moral reasoning assessments, another purpose of the current study attempts to develop a measure of the Confucian self and provide evidence to support the construct validity of the measurement. Western moral self/identity is considered as a source of motivation that bridges a gap between moral reasoning and behavior, and the more
an individual’s moral identity is essential to the self, the more likely one will behave morally (Hardy & Carlo, 2005; Hardy & Carlo, 2011a, 2011b; Reynolds & Ceranic, 2007; Walk, 2004). It is evident that moral self is a crucial predictor as well as a mediator in moral cognition and behavior (Aquino & Reed, 2002; Reynolds & Ceranic, 2007). Furthermore, previous findings indicated that moral self (Western research) is correlated with moral reasoning (e.g., Aquino & Reed, 2002), and moral self and moral reasoning interact to influence moral behaviors (e.g., Reynolds & Ceranic, 2007). However, until recently, empirical research addressing the link between the Confucian self and moral outcome is scant. Thus, associations among the Confucian self, moral judgment, and moral behavioral tendencies are explored in this study.

Overall, this study attempts to describe the Confucian self by grounding Confucian ethics and its construct of the self-concept. Chapter Two illustrates Confucian ethics, its difference from the Western ethics, and the concept of the Confucian self, and states research questions. Chapter Three focuses on developing a measure of the Confucian self and providing evidence for its validity. Chapter Four presents study results, in which relations among the Confucian self, moral judgment, and moral behavioral tendencies are examined. Chapter Five states a synthesis of the study results, with a discussion of the implication of the Confucian self in moral conducts.
CHAPTER TWO

THEORETICAL BACKGROUND AND RESEARCH QUESTIONS

Confucian Ethics

Confucian ethics is regarded to be greatly influential in the traditional China. Although contemporary China has been undergoing huge changes in society, economy, politics and culture since earlier 20th century, Confucian influence is still enduring (Dien, 1982). Basically, Confucian ethics is considered to be humanistic, family-based, obligation-based, and relation-based (Chan, 1963; Ames & Rosemont, 1998; Ho, 1995; Ip, 2009; Lai, 2003; Tu, 1984a; Yao, 1996). Confucians hold a belief that there is a “common principle of order running through Heaven, Earth, and human society” (Munro, 1969, pp. 39). They see the universe as one moral unit with its own justice and goodness. Put another way, different from a religious belief that there is a natural law from God or pre-set fixed order by supernatural force, Confucians believe that the world runs by its own (Li, 2006) and the order that world follows is named Tao or Tao of Heaven (Confucian Way, or principles). Western ethics pursues moral principles that would maximize the greatest good for all members (Rawls, 1971; Rest, et al., 1999) and the universal-sharable principles are the primary concerns in the Western ethics, with its purpose for protecting each individual (Rawls, 1971; Rest, et al., 1999a). On the contrary, Confucian ethics places emphasis on self-perfection with the search of human nature within (Chan, 1969; Ames & Rosemont, 1998; Tu, 1984a, 1985; Yao, 2000). That is, the quality of the self that demonstrates Confucian Tao is valued.
Confucian ethics is neither a set of lofty doctrines in ivory tower (Zeng, 2011) that are beyond ordinary people’s reach and practice nor the idealism of romantic Utopia (Tu, 1985) that is imaginable and unattainable. Rather, Confucian ethics unfolds the principles of various role relationships, which are considered as a set of guidelines to ethical conduct (Munro, 1985), as well as internal and essential to the self. Human being, in this sense, is capable of thinking, actively participates in the world, and is regarded to reveal the Tao (Confucian Way) of the world (Dien, 1982). Human behavior and mind activities are assumed to correspond to the Confucian Tao (Way) (Dien, 1982, Yao, 1996). One, who naturally behaves in the Confucian way and reaches a state of pure mind of ren, is considered to be a sage. The sage is the highest moral ideal in Confucian ethics and therefore endeavoring to be a sage becomes the primary quest in Confucian society (Tu, 1985). Human being is the center of Confucian ethics (Tu, 1984a, 1985; Yao, 1996).

**Comparison and Contrast between Confucian Ethics and Western Ethics**

**Similarity between Confucian Tao and Western moral principles.** In human society, people live together and interact with each other. Principles of human interaction are imperative to human society in order to avoid or resolve social conflicts among human everyday activities. Like law and social norms, but in a different way, ethics is considered as an important guideline that makes possible social cooperation and regulates activities among human beings (Dien, 1982; Frankena, 1970). At this point, both Confucian Tao and Western moral principles share similar roles by providing basic guidelines for human activities and regulating human interaction.
Differences between Confucian Tao and Western moral principles. Although both Confucian ethics and Western ethics make society function, understanding of the nature of morality is considered to be associated with understanding of the nature of the society (Li, 1994; Wainryb, 2006). There are more differences than similarities between these two ethical systems. Previous studies indicate that ethical differences across cultures reside in the distinction between collectivism and individualism. Such view interprets that collectivism highlights reciprocity and obligation, connects one with others, and encourages an individual to subordinate collective interests (e.g., Chow & Ding, 2002; Ip, 2009; Nisbett, et al., 2001), whereas individualism stresses dignity, autonomy, and freedom of the person (Nisbett, et al., 2001; Tu, 1984a) and prioritizes individual interest and welfare (Li, 2008; Rawls, 1971; Rest, 1986). Nevertheless, this view of collectivism and individualism does not fully cover the differences of Confucian ethics from Western ethics. For instance, freedom is not completely dormant in Confucian ethics. Rather, in Confucian ethics, human being is given freedom to develop the self and achieve self-realization (Tu, 1985). However, such freedom does not suggest the freedom out of self-control (Yao, 1996). As discussed in Chapter One, a moral person knows the boundary between duty and limit. For instance, Confucian ethics reminds one “to be watchful over oneself when he/she is alone” (Great Learning, pp.86. in Chan’s translation, 1969). That means, even alone, one is suggested to think and act like they he/she behaves in a public situation.

In addition, reciprocity and obligation in collectivism manifest that exchange equivalent value (Powell, 1990) and are considered to maintain social order. For Confucian ethics, however, reciprocity and obligation do not merely suggest one should pay others in return
and fulfill social duty, but also implies an important process of self-cultivation (Tu, 1983). That is, reciprocity and obligation are not superficially personal activities; alternatively, they serve to inspire one to develop self-knowledge of *ren* and reveal the fundamental principles underlying the performance of social behavior within the Confucian ethics. It appears as if Confucian ethics is too abstract to understand. Instead, Confucian ethics is concrete and practical. This research describes Confucian ethics and compares it to Western ethics by breaking down their differences into several facets.

First of all, the essential understandings of human nature are different in these two ethical systems. Western ethics assumes that everyone is born to be equal and free (Rawls, 1971), and an individual is regarded as an independent and isolated entity. According to Rawls (1971, pp. 505), a moral person has two features: competency of having a conception of their “rational plan of life” and competency of “having a sense of justice” that allows them to apply and act in accordance with the principles of justice. A well-ordered society has its responsibility to guarantee its members are under protection of social justice for their human freedom, human rights, and welfare (Li, 2006; Rawls, 1971; Rest, 1986, Rest, at al., 1999a; Wei, 1996; Wong, 2008). In this sense, universal-applicable principles become important to protect each autonomous individual (Rawls, 1971; Rest, 1986, Rest, at al., 1999a). On the contrary, Confucian ethics assumes that Heaven, earth and self are embedded in one harmonious unity, in which human being’s nature (*xing*, 性) is essential goodness, which, like a sprout, is inherent in every human *xin* (heart-mind) (Chan, 1955; Fung, 1962; Tu, 1984a, 1985). Confucians believe that every human being is a potential sage and Confucian ethics protects the sprout of goodness and helps it to grow into a tree. The special focus of
Confucian ethics is neither to satisfy human needs (e.g., food, freedom, social equality) nor to develop a moral sense to judge the right and the wrong, but to aspire human being to be a sage (moral excellence or a man of ren, 仁) through self-cultivation (Chong, 2007; Dien, 1982; Li, 1994; Lin, 1939; Tu, 1984a, 1985; Wong, 2011). A moral person is characterized as ren person, who has two important features: one is to others (having harmonious relationships with others) and the other one is to the self (growing authentic knowledge of the self). Such a moral person is also called full man, (“man” here is neutral and no gender-biased). In order to protect goodness of human nature and cultivate one to become a sage, social environment of communal harmony, social stability, and humanity are emphasized in Confucian ethics (Chan, 1963; Ames & Rosemont, 1998; Tu, 1984a; Yao, 1996). At this point, Western ethics stresses on development of external social existence for human beings, whereas Confucian ethics highlights human inner strengths and their commitment to the whole society as a person of ren.

Another difference between Confucian ethics and Western ethics lies in moral ideals and their corresponding moral principles (contents). For Westerners, moral ideal is to maximize the greatest good for all members (e.g., distribution of limited resources), protect human beings from social inequality, guarantee basic rights for each individual, provide for the need, and regulate care and intimacy among people (Rawls, 1971; Rest, et al., 1999a; Rest, et al. 2000; Sen 2002; Wainryb, 2006). Correspondingly, moral principles aim to provide a fair and just social environment for each individual to develop equally and optimize the limited social resources. They are considered to be self-chosen and universal-sharable in each human being and reflect common free will of human beings. These moral principles are abstract and open
to scrutiny by a variety of logic critiques, accepted practice, and new experience (Rest, et al., 1999a). Each individual is encouraged to develop a capability of making an autonomous and rational choice and act in accordance with logical justification that are originated from moral ideal on individual rights and wrongs (Waldmann, 2000).

In contrast, as mentioned, Confucian ethics believes that the world runs by its own (Dien, 1982; Munro, 1969; Yao, 1996). Confucian moral ideal is great harmony, which is described as below:

*When the great way prevails, the world community is equally shared by all. The worthy and able are chosen as office holders. Mutual confidence is fostered and good neighborliness cultivated. Therefore people do not regard only their own parents as parents, nor do they treat only their own children as children. Provision is made for the aged till their death, the adults are given employment, and the young enabled to grow up. Widows and widowers, orphans, the old and childless as well as the sick and disabled are all well taken care of. Men have their proper roles, women their homes. While they hate to see wealth lying about on the ground, they do not necessarily keep it for their own use. While they hate not to exert their own effort, they do not necessarily devote it for their own ends. Thus evil scheming is repressed, and robbers, thieves and other lawless elements fail to arise. So that outer doors do not have to be shut. This is called "the Age of Great Harmony" (Great Harmony, in Li Ji, or Book of Rite)*.

Such a moral ideal entails human cooperation, a political environment, harmonious human relationships, and care for human beings. Great harmony in Confucian society shares its feature with nature (the cosmos). It is maintained by harmonious human relationships and self-harmony. Human beings as active participants within nature, and their moral quality becomes important. Confucian ethics education is to cultivate an ordinary people to become a sage, who exemplifies perfection of human being who is capable of handling with all human relationships (e.g., filial piety to parents, trustworthiness to friends, and commitment to nation) and develops a harmonious connection with the cosmos in terms of sincerity and fully

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1 The translation can be found at [http://harmonyoflife.blog.sohu.com/120054483.html](http://harmonyoflife.blog.sohu.com/120054483.html).
develops self-knowledge of ren. Such a sage knows who he/she is and what the true is to self (Tu, 1985). Thus, Confucian principles are concerned with human relatedness of ren and self-knowledge of ren, corresponding to Tao of Heaven. They provide people with the basic guidelines and the ways to interact with others (e.g., five cardinal relationships) and to know the truth of the self (will be discussed later). Through practicing ren in human relationships and continuous rectifying one’s misconducts, self-knowledge is strengthened and a harmonious society is maintained (Dien, 1982; Tu, 1984a, 1994; Waldmann, 2000; Wong, 2012). Thus, pursuit of universal-sharable principles is the primary concern in Western ethics whereas the search for the truth of the self is the primary concern in Confucian ethics.

Third, the relationships between of human beings and the moral principles vary between Confucian ethics and Western ethics. Confucius believes that “men make the way (Tao, principles) great; rather than the way makes men great” (Analects, 15:28, in Chan’s translation, 1969, pp. 44). In other words, Confucians ethics view that human beings are active participants in human society and are able to demonstrate Tao (Confucian Way) that has been revealed to them (Dien, 1982; Yao, 1996). They believe through human’s endeavor to be a sage can demonstrate, maintain, and promote Tao, rather than Tao itself brings human beings with various visible welfares. In Western ethics, by contrast, an individual’s basic interests and liberty will are given the priority and moral principles are therefore to protect an individual’s interests (Bedford & Hwang, 2003). Individual freedom, development, human right, and welfare are the targets that moral principles focus on (Kohlberg, 1969; Rest, et al., 1999a). In this case, Western moral principles could be understood as what is indicated in Analects that “the way that makes men great” (Analects, 15:28).
A person of ren is valued in Confucian ethics because he/she is well self-discipline and acts according to the way (Tao) of cosmos. On the contrary, an individual in Western ethics is applauded when he/she is capable of making rational choice (Dien, 1982; Rest, et al., 1999a; Stams, et al., 2006). Western ethics aims to protect “one’s potentials in one’s own way” (Bedford & Hwang, 2003, pp. 130) and thus agreed-on moral principles is stressed in order to make possible fully social cooperation and realize moral ideal—the greatest good for all (Kohlberg, 1969; Rest, et al., 1999a), whereas Confucian ethics underscores the self and attempts to cultivate human being to be sage, who reaches the sublime of moral standards with knowledge of the truth of the self and enjoying harmonious relationships with others, society, and cosmos, as well as himself/herself (Yao, 1996). Thus, what the self is to be is emphasized in Confucian ethics, whereas what moral principles are to gain is stressed in the Western ethics.

In addition, as discussed earlier, Western ethics regards each individual as a rational and autonomous moral being who is given freedom and is capable of making rational choice. Moral principles are open to scrutiny of logical coherence, established practice and are subject to change if they do not meet the human need for their interests in a Western society. Each individual is encouraged to challenge these principles in order to guarantee that each individual is treated equally and their basic right is protected (Rest, 1999a). By contrast, in Confucian principles, human beings are encouraged to keenly learn, practice, and demonstrate Tao (Confucian way) without doubt or challenge, but with sincerity. They think and act like a sage, by practicing of ren in social activities with earnest self-cultivation, through which they are brought to an ultimate moral goal in their everyday life (Hwang, 2012;
Li, 1994; Yao, 1996). Confucian principles are sensitive to social positions. A ruler has more of a moral burden than the farmer, because a ruler is considered not only to govern, but also to set himself as a moral exemplar for his people. By contrast the Western view is that all people must subscribe the same principles regardless of status. Neither logical critiques nor debate is encouraged to challenge Confucian principles. It appears that people in Confucian ethics fail to develop critical thinking for their social laws and principles as Westerners.

However, some Eastern researchers (Ames, 1983; Tu, 1985; Yao, 2000; Wong, 2012) argued that Confucian principles, social laws or rules are developed by neither social elites nor authority. Rather they are revealed and transmitted by the ancient sages who are considered to exactly embody Confucian spirits of ren in terms of human relatedness and self-knowledge, which are in line with the law of nature. Confucian said, “I transmit but do not create. I believe in and love the ancients….” (Analects, 7:1), and he also said, “I am not one who was born with knowledge. I love ancient [teaching] and earnestly seek it” (Analects, 7:19). In other words, Confucius himself did not seek agreed-on universal-applicable moral principle, but followed the Way that the ancients (sages) revealed and earnestly sought it and practiced it. Regarded as an excellent educator and moral exemplar, Confucius did not fight for human right, welfare, or freedom. Rather, he set him as an example, acted like a sage, taught and guided his disciples how to become sages (discussed below).

At this point, in the West, moral principles are believed to be sensitive to individuals, protect each individual, and satisfy their basic needs. It seems less likely for Westerners to sacrifice freedom, interests, and welfare, but to maintain the principles that are considered outdate in Western ethics. Instead, human beings are regarded to be sensitive to Confucian
principles (Tao), and to follow, practice, and demonstrate them in order to become a person of ren. It is unlikely for people to abandon the Tao and appeal to other romantic idealism or superficial social equality in Confucian ethics. The comparison and contrast between Confucian ethics and Western ethics are summarized in Table 1.

Table 1
Comparison and Contrast between Confucian Ethics and Western Ethics

<table>
<thead>
<tr>
<th>Similarities:</th>
<th>Confucian ethics</th>
<th>Western ethics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roles and purposes of morality</td>
<td>Provide basic guidelines for human activities; Regulate human interaction and cooperation; Not self-serve at the expense of others.</td>
<td></td>
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<tr>
<td>Differences:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Purpose of moral principles</td>
<td>Freedom, human rights, interests, welfare, and the greatest good</td>
<td>Harmonious relationships with Heaven, Earth, others, and self-harmony; Being a sage</td>
</tr>
<tr>
<td>2. Moral principles</td>
<td>Abstract, rational, logical</td>
<td>Concrete, practical</td>
</tr>
<tr>
<td>3. Attitudes towards moral principles</td>
<td>To debate, to challenge, and seek for a universal-applicable moral principles</td>
<td>To believe, to practice, and to demonstrate Tao (the Way, the principles passed down)</td>
</tr>
<tr>
<td>4. Inherent in human nature</td>
<td>Freedom, human rights</td>
<td>Goodness</td>
</tr>
<tr>
<td>5. View of social members</td>
<td>Individual, independent, unique, isolated</td>
<td>Interdependent, relational</td>
</tr>
<tr>
<td>6. Moral goal</td>
<td>Being an autonomous human being who is capable of making a choice</td>
<td>Be a sage who achieves the loftiest understanding of self and is a standard of human relatedness</td>
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<tr>
<td>7. Relationships with Nature</td>
<td>----</td>
<td>Self and Heaven, Earth is one unity</td>
</tr>
<tr>
<td>8. The way to be moral</td>
<td>Critical thinking</td>
<td>Self-cultivation² and practice daily activities</td>
</tr>
<tr>
<td>9. Relationship between human and moral principles</td>
<td>Moral principles are sensitive to human being and serve for human well-being and welfare</td>
<td>Human being are sensitive to moral principles and make moral principles great, advocate and demonstrate them (Tao, the Way)</td>
</tr>
<tr>
<td>10. Open to examination</td>
<td>Moral principles</td>
<td>The self</td>
</tr>
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</table>

² Self-cultivation: please see details in the following discussion.
The core concept within Confucian ethics is *ren* (仁) — the highest moral standard—that directs a person to become a sage (Chan, 1955; Chong, 2007; Dien, 1982; Dull, 2005; Li, 1994; Tu, 1984a; Wong, 2008, 2011). Different from other moral virtues or traits, such as honest, compassionate, fair in Western ethics or responsible and tolerant in Eastern ethics, *ren* has its unique and prominent features in Confucian ethics (Dull, 2005; Tu, 1985). Confucian Way (Tao) is characterized as *ren*, which is considered as an essential feature in the Confucian ethics and denotes manifestation of humanity (Tu, 1985), ideal human relationship (Oldstone-Moore, 2002), and the ultimate principle for moral behavior under any situation (Wong, 2008). *Ren* has been variously translated, such as benevolence, love, perfect virtue, goodness, humaneness, humanity, tenderness, and so on (Chan, 1955; Li, 1994). However, these translations mainly stress on *ren* in terms of general virtue and do not essentially convey the features of *ren*.

Etymologically, *ren* (仁) is consisted of two parts: “a human figure” (Tu, 1985, pp.84)—symbolizing the self, and “two”—signifying human relations, symbolizing a combination of ideas that highlight harmonious interpersonal relationships (Chan, 1969; Hall, 1987; Ip, 2009; Lin, 1939). *Ren*, in this study, represents an integration of self-perfection and harmonious relationships with others. Some researchers (e.g., Rosemont, 1997) regard Confucian *ren* ethics as a parallel with feminist care ethics, for the reason that both these two ethics lay emphasis on care and consideration for others and nurturing human relationships. They view that, like feminist care ethics, Confucian *ren* ethics fails to capture moral domains such as justice, human right, and freedom. On the other hand, Confucian philosophers (e.g., Herr, 2003; Li, 1994) argue that Confucian ethics is different from the feminist care ethics
and Confucian ren ethics cannot be merely equal to the sum of human relationships or care for others. Human relationships in Confucian ethics are not simply reducible to human caring relationships (Ames, 1983; Tu, 1984a, 1985; Yao, 1996). Rather, Confucians believe that human development is not divorced from others’ participation (Fung, 1962; Tu, 1985) and human relatedness is the departure and the return of being moral (Tu, 1985), as discussed in Chapter One. Confucian ren ethics provides profound moral implication and principles (Tao, Way) underlying human relationships and daily activities (Chan, 1969; Tu, 1985, 1994) and human relationships of ren imply principles and guidelines for a moral life and the direction of self-realization of sagehood (Herr, 2003). Ren is the most fundamental and the highest moral principle (Ames, 1983; Chan, 1955; Fung, 1962; Herr, 2003; Li, 2006; Tu, 1984a, 1985; Wong, 2008; Yao, 1996) for “maintaining psychosocial homeostasis in Chinese society” (Bedford & Hwang, 2003, pp. 132).

In the present study, Confucian ren provides principles and ways for human relatedness and self-cultivation (Tu, 1985). It is an inexhaustible source of all proper behavior (Dull, 2005) and creative communal expression (Tu, 1984a, 1985), and serves as a probe for inappropriate norms (Wong, 2008). Confucians believe that moral development unifies both internal development of self-cultivation and external engagement in human activities (Dull, 2005, Ip, 2009; Tu, 1984a, 1985; Yao, 1996, 2000). Such process of becoming ren (human/humane) is understood as a dynamic process of self-development in terms of continuous interactions with others and the search for self-knowledge. It does not require a rational or logic examination, but entails a critical process of self-examination and self-evaluation through practicing a variety of human daily activities of ren (Chan, 1955; Ip,
is not only static state or personality trait as Weber (1964) understood, but also indicates an organic process that allows one to perfect oneself under the direction of Confucian Tao (Way).

It is important to note another Confucian conception—*Li* (*propriety, 礼*), which is discussed its relationship with the broadening process of the Confucian self later. Confucius insists that, in order to become a person of *ren*, one needs to “conquer oneself and return to *li*” (Analects, 20:1). *Li* symbolizes the propriety of actions or proper conduct (Tu, 1985) and it has been translated into ritual, good manner, and ceremonies. A person in Confucian society is expected to behave in accordance with *li*, the standards of acceptable social behavior (Oldstone-Moore, 2002). Especially, *li* is embedded in *Wu-Lun* (*five cardinal relationships, 五倫*: ruler and subject, father and son, husband and wife, elder and younger brother, between friends). Some Western scholars (e.g., Waley, 1939) wrongly interpret *li* into the meaning that one needs to abandon the self and obey the *li* (*social norms*). Rather, *li* is based on *ren* and is standardized according to *ren* and significance of human nature of goodness (Tu, 1985). *Ren* provides ground for the *li* and serves as a detector for obsolete norms (Wong, 2008). Since one’s daily activities involve others’ participation and harmonious human relationships are emphasized in Confucian society, *li* (*propriety of conducts*) entails concrete standards that allow people to live in a harmonious way with others (Chan, 1969; Tu, 1985). “To conquer oneself” means self-cultivation (Tu, 1968), which is considered as “precondition for harmonizing human relations” and is fundamental to “all forms of social interaction” with moral implication (Tu, 1985, pp. 56). Nevertheless, one behaves according to the *li* in
Confucian ethics cannot be merely understood as that one acts according to social norms or authority in Western society. Instead, the reason that one behaves in according to li resides in that he/she “responds to the standards that have inspired us to become an integral part of the community” (Tu, 1985, pp.97).

In short, ren is the inner quality for both self-cultivation and human relatedness (Chan, 1969; Fung, 1962; Li, 1996; Ip, 2009; Tu, 1985; Wong, 2012). It represents “capability of compassion or benevolence for fellow humans” (Ip, 2009, pp. 464) and entails the highest moral principles and guideline for human being to think and act (Li, 2008).

**Confucian Self**

Diverse studies have been developed to explore moral self in the light of Western perspectives. For instance, trait-based model places emphasis on the importance of self-consistency with morality that one identifies oneself (Aquino & Reed, 2002; Blasi, 1983). The sense of moral self matures with increasing desire for self-consistency with one’s internal experience of moral goal instead of external contents (e.g., relationships) (Damon & Hart, 1988). Social cognitive perspective views that moral self refers to a network of cognitively accessible moral schemas that are readily activated (Lapsley & Narvaez, 2004; Narvaez & Lapsley, 2009). It denotes oneself, one’s relationships, and one’s experience in the light of self-commitment (Higgins, 1999). Moral self-schemas allow one to automatically interpret and respond to moral situations as a moral expert (Lapsley & Narvaez, 2004; Narvaez, et al., 2006). These perspectives regard the self as an independent and rational conscious being (Li, 2003). Being moral, self is unified with morality by self-commitment to what is morally right.
It is essential for one to be consistent with moral ideal, and an integration of morality and self determines the height of moral maturity (Bergman, 2002). However, these studies mainly focus on the aspects with regard to personality, traits, moral self-schema in the Western research, which does not consider the inner quality or strength of the self as valued in the Confucian ethics. Cognition, social identity, and emotion are remarked within domains of Western research. It appears that the existence of moral self is limited to the scopes within human society in Western perspectives and does not capture the human nature with cosmos as what has been addressed in the Confucian ethics. Some Eastern scholars (e.g., Markus & Cross, 1990) argue that the Eastern self should be distinguished from the Western concept of moral self.

Unlike conception of isolated and autonomous individual in the Western perspective, the notion of the self is regarded to be relational and interdependent in the Confucian ethics (Ames, 1983; Bockover, 2010, Tu, 1985, 1985; Yao, 2000). According to Tu’s (1984a, 1985, 1994) interpretation of Confucian thoughts, the inner logic of moral self in Confucian ethics is twofold: broadening process and deepening process, which are imperative for one to realize ren. Both the broadening process and the deepening process take the living person as their point of departure (Tu, 1984a, 1985). In order to fully develop the self, ren is unique and central to being a moral self and provides a guideline for one to bridge the gap between an uncultivated person and a sage (Chan, 1955; Dien, 1982; Tu, 1984a; Wong, 2012). Confucian self, here, is neither simply restricted to self-commitment to ren nor limited to moral self-schema of a network of social relationships. Rather, it entails that one carries out Confucian ren into practice within daily activities and searches the truth of the self with
self-reflection. An achieved person as ren (a sage) reaches the loftiest wisdom and understanding of human affairs and is considered to be morally perfect in society (Dien, 1982, Tu, 1984a, Yao, 1996, 2000, Wong, 2008). Such a person is capable of taking into consideration all the facets of a certain situation (Dien, 1982) and knows what is right and good, and performs accordingly (Lin, 1939).

**Broadening process.** The broadening of the self is considered as a process that the self grows human relationships by gradually enlarging the self to the family, neighborhood, community, country, and world and the universe (Tu, 1984a). This process is symbolized an “a series of concentric circles” (Tu, 1984a, pp.102), representing an expansion of a network of human-relatedness. Some scholars (e.g., Weber, 1964) criticize that Confucian ethics merely focuses on hierarchical relationships and fails to develop universal principles such as human rights and social justice. Some other social scholars (e.g., Waley, 1939) view that the Confucian self is defined in terms of various social roles. Indeed, Confucians ethics develops “Wu-Lun” (five cardinal relationships) to address human social relationships. Nevertheless, these arguments misunderstood the fundamental ideas of Confucian ethics. In fact, Confucian philosophers (e.g., Chan, 1999; Fung, 1962; Lin, 1939; Tu, 1984a, 1985) argue that self-development of ren cannot be divorced from others’ participation (Fung, 1962; Ip, 2009; Tu, 1984a). The moral implication of ren therefore becomes profound because of its applicability in human interaction. If this was not so, then ren would be nothing but a metaphysical conception or the abstract knowledge of a moral ideal that can be obtained by only literal exploration. No one could deny that morality requires action and, ren here is used
to infuse daily activities with moral significance.

Broadening process provides grounds and human relationships create diverse opportunities for one to practice ren. Such a process is considered as a dynamic and endless one that allows the self to be open to a variety of structures of social experience and human-relatedness; reversely, exposure to continuous communication and cooperation with others enables one to grow and endure to develop (Tu, 1984a). In other words, broadening process (horizontal) is an organic process that transforms a small self (private ego) to a big self (a larger context of the human relationships), and through extending the self in terms of ever-expanding network of human relationships, one develops his or her inner resources into a moral person who is capable of caring and responsible human being (Tu, 1985). Such a self of ren co-develops “moral selves together with others and morally co-flourish themselves with others” (Ip, 2009, pp.189). This is what Confucius said, “A person of ren is one who, desiring to develop himself, develops others, and in desiring to sustain himself, sustains others” (Analects, 15:24, pp. 189). At this point, ren is well expressed via social relationships (Ip, 2008; Tu, 1985; Wong, 2012; Yao, 1996).

It is important to note that human relationships within the Confucian ethics are different from personal relationships within a Western society, or relationships with God, or relationships with social organizations in terms of a social contract. It would be assertive to come to conclusion that the Confucian self is to establish various social relationships; or it is the sum of human relationships; or one adjusts himself/herself to the external world. Rather, Confucians views that such a self with concentric circles of human relationships denotes an inner communal quality of ren and each Confucian relationship (with family, community,
country and the world) is considered to contribute to moral development and formation of the self (Tu, 1985). Human relationships represent the social scopes that one extends ren to others. The proper behavior and rituals are well described in Wu-Lun (five cardinal relationships) or li. However, this study does not attempt to discuss the details of various human relationships within the Confucian ethics. Instead, this research highlights the importance of practicing ren in human relatedness to the development of the Confucian self.

In short, the broadening process of the self is defined in terms of extending ren to others, including family, community, country, and world/the universe. Through expanding ren to others, one spreads moral consideration to a larger social scope, connects the self to the cosmos and realizes ren (Bockover, 2010; Tu, 1985; Yao, 2000).

**Deepening process.** Another facet of the Confucian self is the deepening process of the self, indicating the degree of self-knowledge, to which “one understands one’s mental state and appreciation of one’s inner feeling” of ren (Tu, 1985, pp.19). Confucians believe that the self is ongoing evolving (Chan, 1999; Lai, 2003; Tu, 1984a) and self-knowledge develops in terms of experience through learning knowledge in terms of the body (physical activities), mind (cognition), soul, and spirit (Tu, 1984a, 1985, 1994).

In the Western perspective, self-knowledge refers to a person’s knowledge of one’s relations to the world that allows one to constantly regulate and survive (Higgins, 1996). On the contrary, self-knowledge in Confucian ethics is shapeable, not passively to reflect social existence (Tu, 1985). A human being is a positive participant throughout one’s life and social activities. The deepening process of the self indicates an unceasing search of the true self,
which is called authentic learning. Such learning is distinguished from cognitively abstract structures of object truth and acquisition of skills (Tu, 1985). To know the self, in this sense, is to perfect oneself and realize oneself. It is the path that one obtains knowledge of the self and relies on it to improve and transform the self. A commitment to the inner resources of ren allows one to transform without losing one’s spiritual identity (Li, 2003; Tu, 1985). Thus, self-knowledge manifests human real nature (Tu, 1985).

In the present study, deepening process of the self is defined as the degree of self-knowledge and consists of four levels: body, mind, soul, and spirit (Tu, 1984a, 1985, 1994). Level One of the deepening process (body) refers to physical activities, such as ritualization and proper action (Yu, 2008), which are consistent with propriety (li). Since one’s daily activities involve others’ participation and harmonious human relationships are emphasized in the Confucian society, li describes concrete standards that allow people to live in a harmonious way with others (Chan, 1969; Tu, 1985). For instance, li provides human beings the ways to interact with parents, authorities, and friends. Kohlbegian or Neo-Kohlbergian theory views that one is a partially-reciprocally developed moral being when he/she acts according to social norms or social expectation, seeks approval from society, or obeys authority and avoids to be punished. It appears as if people in Confucian society are bundled by various social norms (li). However, Tu argued (1985, pp.86) that “the true spirit of li is always grounded in ren” and Wong (2008) indicated that ren is a detector for inappropriate li (rite) and releases people when they are imposed by obsolete norms.

Furthermore, in level one, personal growth or maturity of the self is not negative socialization or internalization of expected social norms, but a positive involvement in
“recognizing, experiencing, interpreting, and representing the communicative rationality that defines society as a meaningful community” (Tu, 1994, pp.178). Confucians believe that a person, departing from ritualization of the body by incorporating societal norms and values in one’s own behavior with self-efforts and self-awareness, will transcend the social and cultural restrictions of the society by altering them into tools of self-realization (Tu, 1994).

Level Two—mind, denotes one’s awareness of self-cultivation via daily practice of ren in human relations and willingness to rectify one’s own misconducts. One in level two does not perform li or act in a fixed way in order to meet social expectation. Rather, people are wholeheartedly aware of mental state of becoming ren and actively participate in human society (Tu, 1985). That is, self-knowledge at this level entails bodily development of social propriety and cognitive consciousness of the importance of physical activities. Level Three—soul, symbolizes pursuit of being a junzi (profound-man, gentleman, 君子) and practicing ren in human relatedness spontaneously and naturally. Endeavor to be humane (ren) is the primary theme in this level. The difference between Level Two and Level Three resides in that the former is explicit and one needs to make conscious efforts to know and preserve moral self of ren, whereas the latter is implicit and provides an inner source to direct one to think and act morally in a natural way. Self-knowledge of Level Three indicates that profound-man (junzi) searches the Way (Confucian Tao) within soul or heart and appreciates one’s self as “aesthetic appraisals” of ren (Tu, 1985, pp.104). Level Four—spirit, indicates perfection of human being (sagehood). Person at this level connects Heaven and Earth with sincerity (cheng, 誠) beyond our comprehension and “represents the ultimate standard of human relations” (Mencius, 4A: 2, in Chan’s translation, 1969, pp.73). In Level Four, one
achieves harmony in human nature with human society and the cosmos, as well as self-harmony.

In short, deepening process of the Confucian self undergoes from bodily practice of ren in daily activities to a deeper understanding of the grammars that underlie the forms of physical activities to a state of harmony with the self, others, and cosmos. It enables one to transcend “egoism, nepotism, parochialism, ethnocentrism, and chauvinistic nationalism” (Tu, 1985, pp.178) and maximizes one’s potentials to develop ren.

The importance of integration of broadening process and deepening process. Both self-knowledge and harmonious relationships with others and universe are important to one’s existence in the Confucian society. Tu, (1984a, 1985, 1994) believed that the integration of broadening processes and deepening processes are central to Confucian self-development. These two processes are reciprocal and interdependent to each other. Tu (1984a) further explained, as one understands that the self extends to a large context beyond the satisfaction of one’s physical sense, a deeper comprehension and appreciation of the self develops into lofty humanistic aspirations with lived experience rather than abstract ideas. Mutually, a deeper degree of self-knowledge facilitates the self to enlarge one’s involvement in human community. Otherwise, it is dangerous for one either to become superficial and naïve expansion of one’s influence with self-awareness, or to result in “a form of self-imposed isolationism” (Tu, 1984a, pp. 219) without participation in human-relatedness activities (Tu, 1984a, 1985). Thus, the Confucian self is an open system and public-spirited, on the contrary to an isolated entity in Western perspective (Bockover, 2010; Tu, 1985). Only through
expanding human relatedness and deepening knowledge of the self, can one become ren or a true person (Bockover, 2010).

In short, the Confucian self characterized as ren opens the self to a constant process of human thriving in terms of an ever-expanding network of relationship and self-knowledge (Tu, 1984a, 1994). Therefore, the Confucian self is not merely a state of being, but also an active process of self-transformation (Tu, 1994). Such self demonstrates a living form and establishes a standard of self-development serving as a foundation of motivation for the human community as a whole (Tu, 1985, 1994).

**Previous Cross-Cultural Findings on Moral Judgment**

According to the Western perspective, moral thinking is concerned with moral good/evil of right and wrong that is based on reasoning according to “the requirement of human nature” (Dien, 1982, pp. 333) and relies on the way that an individual deals with his/her conflict with others and society (Hwang, 2012). The cognitive-developmental model lays emphasis on a rational pattern of cognitive thinking (moral reasoning) throughout human life. Psychologists (e.g., Kohlberg, 1969) believe that human being share a common cognitive paradigm of scopes of human relations when it comes to moral conflicts. Measures (e.g., Defining Issues Test and Moral Judgment Interview) rooting in Western settings, nowadays, are used to explore Chinese people’s moral development (e.g., Ma, 1988; Ho & Lin, 2008). However, cultural researchers (e.g., Chuang, 2008; Ma, 1996; Tsui & Windsor, 2001) found that Chinese people (including Mainland Chinese, Taiwanese and Hong Kong people) are more likely to maintain social norms or laws than their Western counterparts, while they have
lower postconventional thinking score than their Westerner peers. It appears as if Chinese people emphasize maintaining norms and law, whereas the Westerners lay stress on strategy of sharable ideal and universal cooperation when they face moral dilemmas. This could be explained by Rosen (1980) who indicated that Chinese people prioritize authority and law contrast to Western individual rights and human interest.

On the other hand, some recent comparative studies (e.g., Ho & Lin, 2008) found that Chinese business men have higher postconventional scores than their U.S. peers, which is incompatible with early findings. These inconsistent findings may be caused by different study designs or pooled samples. However, it is important to note that moral concepts, such as human right, are dormant (Dien, 1982) in the Confucian society. At this point, it is unclear whether or not the Western tools detecting moral concepts, such as human rights, freedom, justice, and individual autonomy, really reflect Chinese people’s moral judgment development. Take Neo-Kohlbergian theory for instance. Theoretically, cognitive moral schema reflects the way that an individual understands social knowledge and sees the different scopes of human relationships when attending to moral dilemma, addressing such as right and duty (Rest et al., 1999a, Rest, et al., 2000). Nevertheless, the way people make a moral decision may not merely rely upon the Western concepts of justice and fairness (Rest, 1986); other moral concepts in a different ethical system (e.g., Confucian ethical system) may exert more influence on people’ judgment between the rights from the wrong. Thus, a Western tool for measuring moral development may not capture the aspects of an Eastern ethics. For instance, some Western tools (e.g., DIT) measure an individual’s strategy to resolve moral conflict in terms of human right, welfare, and interest underlying social
knowledge and do not measure other moral conceptions, such as filial piety, tolerance and harmony, which are emphasized in Confucian ethics. Thus, there is a need to explore Confucian ethics and its foci.

**Exploring the Relationships between the Confucian Self Development and Moral Behavior**

The definition of the Confucian self in the current study is based on traits that are valued in the Confucian ethics. Constructs of the Confucian self (broadening and deepening of the self) are different from Western perspectives of moral self, which are moral trait-based (Aquino & Reed, 2002, Blasi, 1984) or cognitive accessible moral self-schema (Lapsley & Narvaez, 2004; Narvaez & Lapsley, 2009). As discussed above, Confucian self is considered as a central role in maintaining social order and harmonious social relationships. Confucian self of *ren* indicates inner strengths that integrate profound self-knowledge and proper conducts to others within human society (Tu, 1985). It is unlikely that a person, who develops *ren*, does not behave according to *li* – propriety of action (Ames & Rosemont, 1998; Tu, 1985). Thus, Confucian self is supposed to bring about a good social behavior.

Western perspectives view that moral self is important to be self-consistent to one’s moral ideal (Aquino & Reed, 2002; Blasi, 1984; Hardy & Carlo, 2011a; Lapsley & Narvaez, 2004). For instance, the trait-based perspective views that individual as a moral agent who is responsible for his/her behavioral outcomes in accordance with one’s sense of self-importance of moral identity (Blasi, 1983). Social-cognitive model regards moral self as an accessibility of moral schema, which allows individual to be more sensitive to moral
problems, interpret and react to these situations with consideration of moral commitments (Lapsley & Narvaez, 2004; Narvaez & Lapsley, 2009). These models of moral self provide sound interpretation and evidence.

On the other hand, one may ask whether a strong Confucian self allows one to behave in a moral manner. Although philosophical theories have proposed a model of the Confucian self, it empirically remains unknown the roles of the Confucian self in behavioral outcomes. For this reason, there is a need to explore the association between the Confucian self and moral conducts.

**Exploring the Relationships between the Confucian Self and Moral Judgment**

**Development**

Moral judgment is considered as a strong predictor in moral outcome and empirical findings indicated that the more advanced moral schema one uses, the more likely one performs moral behavior (e.g., Kohlberg, 1969; Rest, 1999a). Such findings were confirmed in other studies (e.g., Derryberry & Thoma, 2005; Reynolds & Ceranic, 2007). Most of contemporary research explored Chinese people’s moral reasoning with Western measures, such as Rest’s DITs (1979, 1999). For instance, Au and Wong (2000) found guanxi (personal relationships or kinship, the derivatives of Confucian doctrines) interacts with moral reasoning to influence business auditor’s professional ethical judgment in Hong Kong. On the other hand, the Confucian notion of human-heartedness (humanity or *ren*) is found to be significantly and positively related to a moral choice, while integration (collectivism) is found to play a poor role in ethical decision-making among people in finances who are from
Shenzhen Special Economic Zone of China (a rapidly developing city) (Woodbine, 2004). However, these findings may have been influenced by the participants’ professional training. Some researchers (e.g., Dien, 1982; Hau & Lew, 1989; Ma, 1988, 1996) insist that traditional Confucian concerns should be taken into account when it comes to using Western tools to measure moral judgment. Although human relationships in Confucian ethics differ from personal relationships in Western perspective, there is a reason to believe that understanding of human relationships and self-consistency with moral self require an ability to interpret cognitive sophistication of moral conflicts (Aquino & Reed, 2002; Selman, 1980).

In addition, a Western perspective views that moral identity functions as a mediator between moral judgment and moral behavior (Derryberry & Thoma, 2005). That is, moral identity allows one to be consistent with what he/she considers the right from the wrong, which creates a need to act in accordance with their moral thinking. For instance, moral identity and moral judgment are found to interact to influence moral behavior (e.g., Derryberry & Thoma, 2005; Reynolds & Ceranic, 2007). Hence, the question emerges whether the Confucian self is associated with moral judgment development and whether it interacts with moral judgment to predict moral behavior.

**Exploring the Links between Modernization and the Confucian Self Development**

With rapid development of cultural, social, and economic globalization and interaction, China has been experiencing great changes in the past 30 years. Traditional cultures, such as Confucian ethics and Taoism have been eroded by Western cultures (Yao, 2000), such as freedom and individualism. It has been found that contemporary China has undergone
modernization and Chinese people are gradually westernized. Chinese people experience changes in idea, behavior, and adjust to the changes in the physical and cultural environments (Yang, 1998). Particularly, people in the modern cities (e.g., Beijing and Shanghai) have practiced a westernized life style and seek for Western values such as freedom, human rights, and individualism (Chen & Chiu, 2010), whereas people in rural areas tend to preserve the traditional values in everyday life (Chen & Chiu, 2010; Cheung, et al., 2006; Davis, 2005). Although modern China has experienced huge social and cultural changes, Confucian ethics still permeates through all parts of life (Dien, 1982; Waldmann, 2000). Questions arise that it remains unknown the extent to which urbanities have been westernized in terms of such as justice and liberty; to what degree, young generation from rural villages maintain Confucian ethics of ren such as filial piety and tolerance (Chen & Chiu, 2010; Fu & Chiu, 2007; Hau & Lew, 1989), and whether or not young people from rural areas develop a similar pattern of moral judgment as their urban counterparts.

**Research Questions**

As discussed above, the present study attempts to develop a measure of the Confucian self and test its validity with other scales, which assess moral judgment, self-reported moral behavioral tendencies, and social desirability.

According to Neo-Kohlbergian theory of morality (moral judgment), individual develops moral schema from preconventional thinking (personal relationships) to conventional thinking (social norms and laws) to postconventional thinking. Individual makes a moral decision in terms of the right or the wrong in given moral conflicts. However, Wong (2012)
indicated that there are no precise moral principles in Confucian ethics in terms of right and wrong, and no specific choices or behaviors are considered to be right or wrong at all times. She suggested that as long as people keep ren in mind when making a moral decision, their choice would be the best (Wong, 2012). Psychologists (e.g., Dien, 1982; Ma, 1988, 1996) suggest that Easterners and Westerners differ in patterns of moral development. It was found that Chinese people (including Hong Kong, and mainland China) have higher maintaining norms scores yet have lower postconventional scores than their western counterparts (Ma, 1988, 1996). It is possible that, people in Confucian ethics emphasize on social stability and harmony (Chow & Ding, 2002; Tu, 1984a), and therefore tend to prefer a compromising, tolerant and even avoiding way to resolve a moral conflict (Dien, 1982). By contrast, in the Western society, one has to violate an established law so as to carry out a higher moral principle (Chow & Ding, 2002), when the set of laws fails to protect individual interest (Chow & Ding, 2002; Dien, 1982; Ma, 1988, 1996).

On the other hand, one important shortcoming when using a Western measure is that it limits testing universal moral ideas (Rest, et al., 1999a). For instance, DIT research (Neo-Kohlbergian method) is designed to present alternatives of justice-based thinking with recognition tasks, and the participants’ job is to choose their preferred alternatives (all justice-based) (Rest, et al., 1999a; Rest, et al., 1999b). One would question that DIT may have no appropriate way to capture the alternatives (such as Confucian conception of ren) that the participant fundamentally has in mind. Thus, there is a need to develop an alternative approach that captures or reflects a pattern of moral development in Confucian ethics.

Furthermore, it was suggested that people in Confucian ethics do not develop a sense of
liberal will but a sense of human-relatedness (e.g., Au & Wong; 2000; Dien, 1982; Fairbank, 1980; Ma, 1988, 1996), which allows them to use relation-oriented tactics to handle conflicts. As mentioned, Confucian human relationships are not merely personal relationships or religious relationships, but relationships of ren. These relationships express moral implication underlying contexts and the way to deal with moral conflict and allow one to transcend a small social scope to a larger one. The process of enlarging the self suggests a journey of self-development of ren. At this point, one would ask, to what extent the Neo-Kohlbergian theory of moral judgment development applies to the Confucian ethics system. In addition, most cross-cultural studies on non-Western and Western population compare their differences in moral judgment in terms of Western tools (e.g., DIT & MJI), few studies have addressed whether or not Westerners develop a non-Western pattern of moral development. Accordingly, this present study asks:

Question 1: How does a measure of the Confucian self describe contemporary Chinese undergraduate students?

Question 2: Do Westerners develop a sense of ren without direct training in Confucian principles?

Question 3: Do Chinese undergraduate students develop a similar pattern of moral judgment as their American peers?

With economic globalization and cultural interaction, it was found that Chinese people in certain big modern cities (e.g., Beijing and Shanghai) have been living in westernized life styles and prioritize Western values such as freedom and human rights in daily activities (Chen & Chiu, 2010), whereas people in the rural areas tend to preserve the traditional values
in everyday life (Chen & Chiu, 2010; Cheung, et al., 2006; Davis, 2005). However, it remains unknown, to what extent, urbanities have been westernized in terms of such as justice and liberty; to what degree, young generation from rural villages maintain Confucian ethics of *ren* such as filial piety, tolerance (Chen & Chiu, 2010; Fu & Chiu, 2007), and whether young generation from rural areas develops a similar pattern of moral judgment as their urban counterparts. Thus, further research questions of interest are stated following:

Question 4: Is there a difference in understanding of *ren* between urban and rural Chinese college students?

Question 5: Is there a difference between urban and rural Chinese college students on moral judgment development?

Cognitive developmental perspective believes that moral judgment is imperative to moral outcome (Blasi, 1980; Derryberry & Thoma, 2005; Keteflan, 1981; Rest, et al., 1999a). These scholars view that moral cognition makes possible that an individual knows what is “morally” right or wrong, and found that individuals with principled (postconventional) reasoning are more likely to exhibit more acceptable behavior than those with a lower level of moral thinking. For instance, it was evident that individuals with a more advanced moral schema (postconventional thinking) tend to exhibit prosocial or altruistic behaviors (e.g., Derryberry & Thoma, 2005; Reynolds & Ceranic, 2007) and perform more ethical behaviors in nursing and business (e.g., Bebeau, 1994; Desplaces, et al., 2007; Keteflan, 1981). On the other hand, as discussed above, current researchers (e.g., Blasi, 1983; 2004; Hardy & Carlo, 2011b; Lapsley & Narvaez, 2004) employed moral self/identity to explain moral conduct. For instance, Reynold and Ceranic (2007) found that moral judgment and moral identity interact
to shape moral behavior when it comes to a low social consensus concerning the moral conducts. Typically, moral self/identity allows one’s daily activity to be consistent with their moral prototype (Aquino & Reed, 2002; Hardy, 2005; Hardy & Carlo, 2011a). It seems that not only moral reasoning provides cognition and resolution of moral conflicts but also commitments to moral ideal of self contribute to moral outcomes.

Unfortunately, until recently, there are few empirical studies have provided evidence with regard to development of the Confucian self of ren and its roles in moral behavior. It remains to be answered whether the Confucian self plays a similar role in moral conduct as does moral self in Western research, and whether Confucian ethics interacts with moral judgment to shape moral behavioral tendencies. Moreover, one study within financial sectors of economically developed region of China found that traditional Chinese value of ren is positively related to moral decision-making process and demonstrates its important role in moral choices (Woodbine, 2004). Thus, this research asks how the Confucian self is associated with moral behavioral tendencies. The specific questions are stated below:

Question 6: Do measures of moral judgment and the Confucian self predict moral behavioral tendencies differently in samples of U.S. students and Chinese students?

Question 7: Do the Confucian self and moral judgment differently predict moral behavioral tendencies between the Chinese urban students and rural students?

Question 8: Do Chinese urban students differ from American students in moral judgment, the Confucian self and their moral behavioral tendencies?

**Demographics**

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Gender difference. Among various demographics studies related to moral judgment, one most debate is whether gender-related orientation in moral development. Gilligan (1977) viewed two moral systems exist: care-orientated and justice-orientated moral judgment. Care orientation focuses on relationships and care for others; justice orientation in moral judgment refers to principles of fairness and equity (Jaffee, & Hyde 2000). Gilligan (1977) insisted that females are care-orientated while males are justice-orientated in moral conflicts. She assumed that social role expectation and life experience contribute to gender difference in moral judgment pertaining to care and justice orientation. Later empirical studies (e.g., Bebeau & Braback, 1989) and meta-analysis (e.g., Thoma, 1986; Walker, 2006), however, failed to support her argument. Instead, they found that men and women have similar patterns of moral judgment, regardless of care and justice orientations. For instance, Juujärvi, et al., (2010) found that levels of care reasoning are positively related to the post-conventional schema and negatively related to the personal interest schema in justice reasoning by examining relationship between care and justice in moral reasoning, using Ethic of Care Interview and Defining Issues Test. They indicated that those individuals at the highest levels of care tend to have the highest level in justice reasoning, implying justice and care are likely to join together in maturity of moral thought. In short, neither females favor care orientation nor males favor justice orientation (Jaffee & Hyde, 2000). In the light of the Western debate on gender difference of moral judgment development, the present study attempts to examine whether there is a gender difference of the Confucian self among the contemporary Chinese and American college students.
**Education level.** Some earlier investigators (e.g., Boldizar et al., 1989; Rest, & Thoma, 1985) suggested that educational level plays an important role in moral judgment. For instance, evidence demonstrated that formal education experience plays a potential facilitator of moral reasoning development (Kracher et al., 2002; Narvaez, & Gleason, 2007; Thoma, & Davison, 1983; Wimalasiri, 2004). Findings indicated that individual tend to have a higher level of moral judgment when they have a higher education level or more educational training. In other words, with increasing educational level, individual prefers a more advanced moral schema when making a moral decision. For example, Rest and his colleagues (1999a) found that P scores and N2 scores of graduate students are higher than those of medical students. Not because graduate students are brighter than medical students; instead, they suggested it is likely that the specialization of the majors, such as philosophy or political science, allows students to get more advantage on a test of moral comprehension. However, the present study does not attempt to investigate the role of educational level in development of the Confucian self. Rather, since little Confucian courses are taught in the contemporary Chinese education system, educational level is considered as a less important in Confucian self-development among Chinese undergraduate students. Nevertheless, supplementary knowledge is provided to better understand the role of students’ level of Confucian knowledge in Confucian self-development (Appendix I).

**Emic/Etic Approach**

Before describing methodology that was used in this study, one of challenges of a cross-cultural study is whether a measurement could reliably and equivalently capture the
aspects of psychological constructs when it comes to cross-cultural contexts. In other words, it becomes crucial with regard to whether the Confucian self-scale well applies to a Western context in this study. At this point, it is important to address emic and etic approaches in a cultural-comparative study.

Theoretically, emic approach refers to the ways that describe or explore human behaviors and thoughts within a specific cultural context, and etic approach refers to the ways that focus on the universality of behaviors and thoughts that human beings share across cultures (Cheung, van de Vijver, & Leong, 2011; Mead Niblo & Jackson, 2004; Morris, et al., 1999). Put another way, the emic approach provides in-depth and inside view of human behaviors and thoughts within a certain culture (Cheung, van de Vijver, & Leong, 2011; Morris, et al., 1999; Warner, 1998), and places emphasis on insider’s subjective self-understandings and reported behaviors (Morris, et al., 1999; Warner, 1998). Alternatively, the etic approach provides comparable constructs that apply to across cultural contexts (Cheung, van de Vijver, & Leong, 2011; Morris, et al., 1999) and highlights observed and measurable features that can be replicated by a paralleled study in a different cultural context (Morris, et al., 1999; Warner, 1998). In order to avoid “emic-etic” dilemma in a cross-cultural study, integration of emic and etic approaches is suggested for the cultural-comparative study (e.g., Cheung, van de Vijver, & Leong, 2011; Peng, Peterson, & Shyi, 1991). Thus, the strength of a combined emic-etic approach is to embrace both the universal and indigenous constructs of specific facets of a culture (Cheung, van de Vijver, & Leong, 2011).

The Confucian self-scale in this study was developed in accordance with deep understanding traditional Confucian thoughts on self-development. Especially, Confucians
believe that one’s moral development in human society cannot depart from others’ participation and in-depth understanding of the self, which are absent in the Western perspectives on moral development. However, it would be assertive to categorize the Confucian self-scale as an emic approach without examining it. Furthermore, most of current cross-cultural studies employ the Western-based measurements to explore similarity and difference between/among cultural contexts. Very few studies have been conducted to look whether Westerners develop a sense of identity in terms of a different cultural thought. In order to answer these questions, this study explored them and provided evidence by comparing and contrasting Chinese sample and American sample using the Confucian self-scale, moral judgment assessment, and the self-reported moral behavioral tendency scale.
CHAPTER THREE
METHODOLOGY

Phase One: Pilot Studies

To measure the Confucian self as theoretically defined above and test its validity with other measures, there was a need to develop a scale that captures the aspects of the Confucian self of ren. This was one purpose of pilot studies. According to Aquino and Reed’s approach on developing a measure of moral self (in Western perspective), Pilot Study 1 was conducted to identify Confucian traits that could reliably inspire one’s knowledge or model of a Confucian person who is characterized as ren. Pilot Study 2 was conducted to evaluate contents of the Confucian self-scale that are apposite to denote the domain of the Confucian self (Pilot, et al., 2007). In other words, Pilot Study 2 was interested in examining the degree to which the construct of the Confucian self can be appropriately represented by the items. Pilot Study 3 was administrated to better understand current college students’ moral behavioral tendencies.

Participants (Sample A). A total of 171 college students voluntarily took survey. Due to online system error, incomplete responses, attention check, and reliability check, 110 valid cases were included for data analyses (24 males and 86 females). Of the 110 students, 43 Chinese college students (19 males and 24 females) enrolled in three Chinese universities and 67 American undergraduate students (5 males and 62 females) enrolled in Educational
Psychology and Research Methodology completed the measures for the pilot studies. Students received class credits for their participation.

**Pilot Study 1: Trait validation.** In order to reliably activate prototype of the Confucian self, it was imperative to sort out a set of Confucian traits of *ren*. For this reason, Pilot Study 1 was conducted. According to Liu’s et al., (2009) study on the prototype analysis of *ren*, 78 prototypes of *ren* were used to explore factors and they were classified into 6 categories, such as righteousness & keeping faith, wisdom & self-cultivation. Among these 78 prototypes, twenty top ranking the Confucian prototypes of *ren* were selected to determine the most important Confucian traits among the contemporary Chinese college students. These Confucian prototypes include: responsibility, trustworthiness, sincerity, respect, humanity, broadmindedness (open-mind), filial piety, tolerance, conscientiousness, altruism (forgiveness), harmonious, generous, friendliness, fraternal love, moderation, active optimism, love, principled. Generally, these prototypes were judged to be above the midpoint of 5-point Likert scale, suggesting that these traits are essential to the contemporary Chinese undergraduates. It is imperative to note these Confucian traits serve as priming items that would allow participants to associate the Confucian self with following questionnaires.

**Method.** Chinese participants were presented a list of 20 traits and were asked to rate the importance of these 20 traits using a 5-point Likert (ranging from 1 = not at all important to 5 = extremely important).
Results and Discussion. Ten top ranking Confucian traits were selected. The mean ratings for each of the ten Confucian traits are shown in the Table 2. There was a good reliability ($\alpha=.926$) for traits.

Table 2

<table>
<thead>
<tr>
<th>Trait</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moral excellent</td>
<td>4.11</td>
<td>0.86</td>
<td>43</td>
</tr>
<tr>
<td>Love</td>
<td>4.31</td>
<td>0.93</td>
<td>43</td>
</tr>
<tr>
<td>Sincerity</td>
<td>4.37</td>
<td>0.80</td>
<td>43</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>4.45</td>
<td>0.73</td>
<td>43</td>
</tr>
<tr>
<td>Filial piety</td>
<td>4.63</td>
<td>0.69</td>
<td>43</td>
</tr>
<tr>
<td>Responsibility</td>
<td>4.53</td>
<td>0.70</td>
<td>43</td>
</tr>
<tr>
<td>Broadmindedness (open-mind)</td>
<td>4.22</td>
<td>0.83</td>
<td>43</td>
</tr>
<tr>
<td>Moderation</td>
<td>4.22</td>
<td>0.88</td>
<td>43</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>4.22</td>
<td>0.88</td>
<td>43</td>
</tr>
<tr>
<td>Make a clear distinction</td>
<td>4.12</td>
<td>0.70</td>
<td>43</td>
</tr>
<tr>
<td>between right and wrong</td>
<td></td>
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</tr>
</tbody>
</table>

However, after an interaction with a Confucian philosopher\(^3\) in Australia, some “trait” items were not regarded to be appropriate for Confucian traits, such as “moral excellent”, “love”, and “Make a clear distinction between right and wrong”. It is possible that Liu’s et al., (2009) study employed exploratory factor analysis to detect prototype of ren and did not fully cover the ethical conceptions of Confucian philosophy. At this point, these three items including “moral excellent”, “love” and “making a clear distinction between right and wrong” were removed from the priming list\(^4\). Alternatively, according to Confucian classics (Four books)\(^5\), tolerance, modest/humility, humanity, and altruism (forgiveness) were added to the

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\(^3\) Dr. Karyn Lai, a Confucian philosopher in Australia.

\(^4\) Dr. Karyn Lai exchanged her opinions and comments on the selected Confucian traits that were used to activate one’s prototype of Confucian moral self of ren via emails. With critical thinking and having read Confucian classics (The Analects, The Doctrine of the Mean, Great Learning, and Mencius), three alternative traits were carefully selected and they replaced the original ones, thus allowing one’s moral exemplar within Confucian ethics properly primed.

\(^5\) Confucian classics (Four books): The Analects, The Doctrine of the Mean, Great Learning, and Mencius.
list as primes to activate a person’s moral prototype of the Confucian self. There are total 11 Confucian traits on the priming list. It is worth noting, although these 11 Confucian traits may not be the ones that represent the all-embracing traits of a Confucian person of ren, they could be used to prescribe a person of ren. Thus, these traits are selected to activate Confucian ideal of morality that are associated with Confucian concepts. They include: Filial piety, Responsibility, Sincerity, Trustworthiness, Conscientiousness, Modest/Humility, Broadmindedness (open-mind), Tolerance, Humanity, Altruism (forgiveness), and Moderation.

Development of Instruments

Pilot Study 2: The Confucian self-scale development (Experts). Pilot Study 2 was run to identify contents of items for the Confucian self-measure that may reliably and validly capture and confirm constructs of the Confucian self. This section illustrates the development of a questionnaire that measures the Confucian self. Item construction was in accordance with Tu’s (1984a, 1985, 1994) theoretical framework, describing horizontal and vertical perspectives of the Confucian self-development: 1) broadening process (horizontal process) enables one to extend ren to a network of relationship; 2) deepening process (vertical process) allows one to deepen understanding of self in terms of ren. The twofold aspects of Confucian self-development assume both consistency with the self and inclusion of other. Broadening process is considered as the process that the self grows a network of human relationship from the self to the family, community, country, and world and the universe (Tu, 1985, 1994). Deepening process is regarded as different degrees of self-knowledge. It symbolizes that one
“learns through experience to appreciate the self not only as a body but also as mind, soul and spirit” (Tu, 1984a, pp. 218).

Method. According to the paradigm of the scale of self-importance of moral identity (Aquino & Reed, 2002), 49 items were developed to indicate the Confucian self. The Confucian self-scale contains two dimensions: broadening process and deepening process, which further include four sub-dimensions consistent with theoretical statement of the Confucian self, respectively. The scale attempts to capture the extent to which a person expands ren relationship to others, and the degree to which a person appreciates the self in the Confucian way.

Procedure. Eight Confucian philosophers were invited to rate the relevance of items forming the Confucian self-scale. The items were evaluated using a 4-point Likert (ranging from 1 = not relevant to 4 = highly relevant). Three Confucian philosophers responded. These scholars were from a variety of backgrounds: one professor is from United States, another one from Singapore, and the third one from South Korea. Agreement on items was calculated in order to determine the appropriate items that could capture of the aspects of the Confucian self.

Results and Discussion. Results indicated that there was 100 percent agreement for 46 items across three Confucian philosophers, 33.3 percent for 1 item, which has been deleted.

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6 They were: Dr. Roger Ames at The University of Hawai‘i, Dr. Chenyang Li at Nanyang Technological University, and Dr. Ranjoo S. Herr now locates at Bentley University.
from the scale, and 66.7 percent for 2 items, which have been combined and adapted into 1 item (Figure 1). Thus, there are 47 items were kept (see the Appendix A).

![Figure 1](image)

**Pilot Study 2: Percentage of Agreement across Confucian Philosophers on Scale of the Confucian Self**

Since the Confucian self-scale was developed in English, 6 Confucian philosophers who are both influent in Chinese and English were invited to confirm Chinese version of the Confucian self of *ren*. Two Confucian philosophers\(^7\) responded and confirmed both the Chinese and English versions of the Confucian self-scale that equally could accurately activate one’s understanding of the Confucian self.

**Pilot Study 3: Moral behavioral tendencies.**  Moral behaviors occur in the social contexts when it comes to human interaction and moral conflicts. Moral behavior are kind of

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\(^7\) Two Confucian philosophers (Dr. Roger Ames at The University of Hawaii and Professor Philip J. Ivanhoe at City University of Hong Kong) confirmed the contents of the Chinese version of the Confucian self-scale that are accurate with the English version of the Confucian self-scale via emails. Both of them confirmed the contents of the Confucian self were well developed from Confucian thoughts on moral self and equivalently expressed in two languages.
actions between those that are good (or right) and those that are bad (or wrong). Typically, moral behavior is defined as a set of behaviors that are judged in accordance with generally established moral norms of behavior (Treviño, et al., 2006). This broad definition gives explanation for behaviors that “reach or exceed minimal moral standards” (Reynolds & Ceramic, 2007, pp. 1610) and are regarded to be ethical, such as being honest. Behaviors that go against moral norms and principles are considered unethical, such as cheating and lying (Reynolds & Ceramic, 2007; Treviño, et al., 2006).

Treviño (1986) indicated that moral thinking and behaviors rely upon the individual’s cognitive moral judgment, i.e. moral reasoning, and moral judgment is considered to serve as a “precursor to moral intention and behavior” (Treviño, et al., 2006, pp. 960). Specifically, the cognitive-developmental perspective assumes that individuals with a higher level of moral reasoning are more likely to take a broader scope of social relations into moral consideration, and therefore they are more likely to engage in moral activities than those with a lower level of moral reasoning (e.g., Rest, et al., 1999a; Stams, et al., 2006). For instance, it was evident that individuals with more advanced moral schema or higher level of moral reasoning tend to exhibit moral conducts, such as altruism and volunteer work (e.g., Derryberry & Thoma, 2005; Reynolds & Ceramic, 2007), and perform more ethical behaviors in their professional careers, such as nursing and business areas (Auvinen et al., 2004; Bebeau, 1994; Keteflan, 1981).

On the other hand, some researchers (e.g., Blasi, 1980; Hardy & Carlo, 2005; Hardy & Carlo, 2011a; Lapsley & Narvaez, 2004; Reynolds & Ceramic, 2007; Treviño, et al., 2006) argue that moral judgment is insufficient for explaining moral behavior, and other factors
(e.g., moral self) interact with moral judgment in producing a moral behavior. Prior empirical research has demonstrated that moral self is crucial to moral behaviors (Aquino & Reed, 2002; Reynolds & Ceranic, 2007) because it allows one to commit to oneself in action (Blasi, 1980; Lapsley & Narvaez, 2004). When it comes to Confucian ethics, theoretically, the more a person develops Confucian self, the more likely one will exhibit moral conducts. However, empirical research addressing the link between the Confucian self and moral outcome is scant. At this point, the current study attempted to answer the association between moral behavioral tendencies and the Confucian self.

On the other hand, since previous scales for measuring behavioral tendencies either focuses on cheating behaviors or ethical behavior in business field, the purpose of the pilot study for measuring moral behavioral tendencies was to develop a scale that could apply to college students in terms of daily activities.

**Method.** A total of 25 items were adapted from previous instruments: *Cheating Behaviors* (McCabe, & Trevino, 1993, 1996), *Scale of Ethical Behavior* (Newstrom & Rush, 1975), and *Social Responsible Consumer Behavior* (Yan & She, 2009). A 5-point Likert scale was applied, ranging from 1 (never) to 5 (all the time). Reversed coding was applied when conducting data. The total score ranges from 25 to 125, and the higher score indicates the more likely to engage in ethical behavior. It contains 5 sub-scales, social cooperation (8 items), cheating (5 items), stealing (5 items), self-serving activity (3 items), and aggressive behavior (4 items). Social cooperation refers to human social reciprocal activity, which is naturally and voluntarily regulated for the sake of enabling human society an effective one
(Fehr & Gintis, 2007; Freeman, 2006; Rilling, et al., 2002). Cheating refers to dishonest behavior that aims to achieve better academic performance by a variety of inappropriate approaches, such as using crib note when taking an exam, or copying homework from other students (Anderman & Midgley, 2004; Bushway & Nash, 1977; Finn & Frone, 2004).

Stealing in this study denotes delinquent behavior that occurs without asking permission to use (Moncher & Miller, 1999) or aims to pirate copyright. Self-serving activity in this study entails behavior that an individual acts based on or takes an advantage of resource to benefit for his or her own self-interest (Babcock & Loewenstein, 1997; Mezuli, et al., 2004).

Aggressive behavior refers to direct (including physical and verbal) and indirect bullying behavior that harms others or excludes others from one’s group for hostile intentions (Dodge, 1980; Kaukiainen, et al., 1999; Österman, et al., 1998).

In addition, in order to detect whether students’ reports on moral behavioral tendencies were socially desired, Social Desirability Scale (Stöber, 2001) was given to participants as well. The variable of social desirability was controlled in the formal study. The Social Desirability Scale contains 16 items and it is coded dichotomously: 0 and 1. Its score ranges from 0 to 16. The higher score indicates more social desirability.

**Results and Discussion.** One hundred and seventy-one students (Sample A) voluntarily took survey. Its reliability was found to be \( \alpha = .928 \). For the U.S. group, the reliability was found to be \( \alpha = .951 \); for the Chinese group, the reliability was found to be \( \alpha = .863 \). Results indicated that Chinese college students reported higher moral behavioral tendencies than their U.S. peers (Table 3). Such a difference was significant, \( t(108) = -2.680, p < .05 \), and it appears
that Chinese college students were more likely to engage unethical behavior than their U.S. counterparts. No significant difference was found on social desirability between Chinese undergraduates and U.S. undergraduates.

Table 3
Pilot Study 3: Difference of Means of Moral Behavioral Tendencies and Social Desirability between U.S. Students and Chinese Students

<table>
<thead>
<tr>
<th>Social Desirability</th>
<th>Moral behavioral tendencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (U.S.)</td>
<td>8.69</td>
</tr>
<tr>
<td>(Chinese)</td>
<td>8.93</td>
</tr>
<tr>
<td>T-value (108)</td>
<td>-.415</td>
</tr>
</tbody>
</table>

-2.680*  

* *\textit{p} < .05

Correlation analysis was conducted to distinguish self-reported moral behavioral tendencies from social desirability. Generally, there was no significant correlation between moral behavioral tendencies and social desirability.

Interestingly, the results indicated that a significant correlation between self-reported moral behavioral tendencies and social desirability among the Chinese college students, whereas such relationship was not found among the U.S. undergraduates (Table 4). Results indicated the higher ethical behavioral tendencies Chinese college students reported, the higher social desirability scores they had. In other words, it appeared that the more social approval Chinese students desired, the more like they reported ethical behavioral tendencies.

Table 4
Pilot Study 3: Subgroup Correlations between Moral Behavioral Tendencies and Social Desirability

<table>
<thead>
<tr>
<th>Moral behavioral tendencies</th>
<th>Social Desirability</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>.035</td>
</tr>
<tr>
<td>Chinese</td>
<td>.570**</td>
</tr>
</tbody>
</table>

**\textit{p} < .001
Nevertheless, these findings gave a rise to a question. That is, it is possible Chinese students have different attitudes toward moral behaviors from U.S. students. In this case, the results of moral behavioral tendencies would be misleading. Also, previous scales for measuring moral behaviors did not take cultural differences or individual’s attitudes toward behaviors into account. In order to better distinguish differences of cultural and social contexts between China and U.S., the scale for measuring moral behavioral tendencies was added with seriousness of such moral behaviors, i.e., their attitudes toward behavioral outcomes (see the Appendix B). Put another way, the scale of moral behavioral tendencies does not only measure undergraduates’ self-reported behavioral tendencies, but also attempts to understand whether there are differences on attitudes towards how unethical behaviors between Chinese and U.S. college students.

**Defining Issues Test.** Neo-Kohlbergian theory views that moral judgment develops in terms of moral schema rather than moral stage in Kohlberg’s theory. Moral schema refers to general content representations of the world, because schema represents the general structure of some stimulus configuration, and is activated intuitively for individuals’ understandings of and reference to necessary epistemic knowledge (Rest, et al., 1999a; Rest, et al., 2000). The Defining Issues Test (hereafter the DIT) is an instrument designed to trigger and assess the importance of moral schemas (Rest, et al., 1999a), by indexing individuals' understandings of and reference to essential epistemic knowledge such as rights, duty, social norms and reciprocity when attending to moral dilemmas (Crowson, DeBacker, & Thoma, 2007; Rest et al., 1999a; Rest, Narvaez, Thoma, & Bebeau, 2000). Particularly, postconventional thinking
is relevant to moral thinking and is characterized as that individual’s rights and duties are consistent with “sharable ideals for organizing cooperation in society, and are open to debate and tests of logical consistency, experience of the community, and coherence with accepted practice” (Rest, et al., 1999a, pp. 41). Recent interpretations of the measure indicate that moral schemas assessed by DIT structure and guide human’s decision-making (Derryberry & Thoma, 2005; Rest, et al., 1999a).

The DIT-2 (Appendix C) is used in the current study to assess moral judgment. It contains five stories or dilemmas, with twelve arguments representing different moral schemas information. The participants first evaluate the importance of each argument in resolving the dilemma (5-point, Likert-type scale), and then choose the four most important arguments in rank order (Rest, et al., 1999a). Early studies have demonstrated it good reliability and satisfactory validity (Rest, et al., 1999a, 1999b, Rest, et al., 2000).

Variables

Independent Variables.

Confucian self. Confucian self was assessed by the Confucian self-scale, developed in the pilot studies. The content validity of the Confucian self-scale has been confirmed by Confucian philosophers as discussed in the pilot studies. It is an instrument used to identify Confucian self-development. It contains two parts: traits (used to prime will be used to prime participants’ Confucian prototype of ren) and 47 items. The 47 items of the Confucian self-scale has two subscales: broadening process and deepening process, with 23 items and 24 items, respectively. Scores on the Confucian self range from 47 to 423 with high scores
indicating more consistency with Confucian self.

*Moral judgment.* Moral judgment was measured by using Defining Issues Test-2 (hereafter the DIT-2). P score and N2 score are two main indices for moral judgment. P score represents the participants’ responses to postconventional argument (stage 5 and 6) within the choices (Auvinen, et al., 2004) and it is deemed to be the extent to which the participants value the significance of postconventional considerations (Rest et al., 1999a). By adding P score to the rating data weighed by three, N2 score is an adjusted index that indicates activation of moral schemas (Rest et al., 1999a). In addition, Personal Interest score and Maintaining Norms score are two moral schema scores and are assessed in a standard way. The Personal Interest score is interpreted as the primary level of moral judgment measured by the DIT (stage 2 and 3), and it also stresses gain or lose in daily life, such as personal interests, and the welfare of family and friends. The Maintaining Norms score represents that participants take a view of society in a whole and are concerned about law and social norms (stage 4) (Narvaez, & Hill, 2010).

**Dependent Variables.**

*Moral outcomes.* Moral outcomes contain moral behavioral tendencies and attitudes toward behavioral outcomes. Moral behavioral tendencies were measured by a self-reported scale of moral behavioral tendencies (MBT), which has been described in the pilot study. The MBT has demonstrated a good reliability ($\alpha=.928$) and contains 25 items with scores ranging 25-125. The higher score indicates more likely to engage in ethical behavior. Also, MBT asks
how they are acceptable to participants as supporting information that could be used to detect cultural difference in understanding moral behavior. That is, another part of MBT assesses attitudes toward behavioral outcomes. It also contains 25 items with scores ranging 25-125. The higher score indicates less tolerable attitude toward unethical behavioral outcomes.

**Covariate.**

*Social desirability and certain demographic characteristics.* Social desirability was assessed by Stöber’s SDS-16 (2001). The SDS-16 is an instrument used to control biased responses which are considered as desirable responding (Stöber, 2001). It contains 16 items with scores ranging 0-16. A higher score indicates higher social desirability. The SDS-16 has demonstrated a satisfactory reliability ($\alpha=.72$). The convergent validity of the SDS-16 has been examined with other measures of social desirability and has been found to be satisfactory (Stöber, 2001).

In addition, several demographics were examined as covariates in order to better understand descriptive statistics for the samples, as well as to investigate the differences of the Confucian self, moral judgment, and self-reported moral behavioral tendencies in demographics. This included gender which was measured dichotomously. Educational level was measured categorically and including the subsequent levels: Freshman, Sophomore, Junior, and Senior. Knowledge of Confucianism was measured continuously and include No at all, A little, Some, and A lot. Value system was measured categorically based on participants’ preference: Traditional Confucianism (e.g., filial piety, loyalty), Modern Western values (e.g., individualism, freedom), and Other religious (e.g., Buddhism, Christian, Jewish,
etc.). Location that one grows up was specially designed for the Chinese students were measured categorically and includes Urban, Suburban, and Rural-town area. To be mentioned, although rural and town samples recruited in this study now are locating in urban areas for their college education, they, more or less, represented a population of people who are from rural and less developed areas in China.

In order to check students’ attention to survey, there were thirteen attention check items that were designed and mixed with question items (please see Appendix D). An incorrect response to an attention check question is coded as 1. Alternatively, correct response to an attention check question is coded as 0. Its score ranges from 0 to 13. The higher score on attention checks indicates less attention is paid to survey. In other words, the lower score one student receives; the more serious one is when he or she takes survey.

**Phase Two: Construct Validity Examination**

Pilot studies have portrayed the development of the Confucian self-scale and the moral behavioral tendency scale. Although there was no statistical evidence of samples supporting content validity of the Confucian self-scale, the process of developing content of the Confucian self-scale derives from the theoretical concept of the Confucian self (e.g., Tu, 1984a, 1985, 1994), which was the construct that the investigator endeavored to measure in this study. Items of the Confucian self-scale were generated in accordance with literature search (e.g., Chan, 1955; Tu, 1984a, 1985; Wong, 2008, 2012; Yao, 1996, 2000) and were sent to a panel of Confucian philosophers to review before to form a reduced list of items (Gliner, & Morgan, 2000). Finally, the representativeness of the Confucian self-scale was
confirmed that these items well capture and measure the concepts of the Confucian self by Confucian philosophers. In phase two, convergent validity of the Confucian self-scale was examined. A scale with good convergent validity demonstrates its high correlations with other measures as theoretically suggested (Gliner, & Morgan, 2000). In this study, relations were examined between the Confucian self-scale, DIT-2 (moral judgment) and moral behavioral tendencies.

**Participants.** Chinese undergraduate students (hereafter the Chinese students for brief) and U.S. undergraduate students (hereafter the American students for brief) were recruited to take the survey. Five hundred and twenty-two Chinese students and 307 American students were attracted to participate in survey. Five hundred and nine Chinese students voluntarily took survey and 485 Chinese students completed survey. Two hundred and ninety-eight American students voluntarily took survey and 280 American students completed survey. In order to have reliable data for analyses, two steps were carried out to filter inconsistent cases, including DIT-2 reliability check and attention check. DIT-2 reliability refers to cutoff criteria that filter random responding, excessive missing data, alien test-taking (for meaningless responses), and non-discrimination (e.g., responding to 3 for 11 items or all items) (Bebeau & Thoma, 2003). Among all responses, 87 cases failed to pass DIT-2 reliability check and were removed from later data analyses. Attention check was designed to check whether students paid attentions to questions and took survey seriously. For example, attention check question may ask in this way: “Please choose ‘somewhat agree’”. If a student randomly responded, his/her response was coded as “1”. If correctly responded, his/her response was coded as “0”.

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Overall, there were a total of 13 attention checks throughout the survey. Results indicated that cases with a score of attention checks greater than 4 appeared to be invalid and arrhythmic. Accordingly, 48 cases were purged because of their higher attention check scores (greater than 4), and cases with a score of attention checks smaller than and equal to 4 were kept for subsequent analyses. Thus, there were 630 valid cases, including 380 Chinese students (251 females, 128 males, and one did not indicate gender) and 250 American students (164 females and 86 males). Brief demographic characteristics of each sample are illustrated in Table 5.

**Sample B (U.S.).** Three hundred and seven undergraduate students enrolled in a Southern University in United States voluntarily participated in the survey. They were from diverse majors: such as education, nursing, social work, health studies, business, and engineering. Two hundred and forty-five students took online version, and 55 students took paper version. Of the 307 students, 280 students completed the survey. Students who completed received class credits for their participation. Of the 280 students who completed the survey, 250 cases passed reliability checks and attention checks, and these cases were used for data analyses.

**Sample C (China).** Five hundred and twenty-two Chinese students enrolled in 9 universities in China voluntarily take part in the survey. Their majors were diverse: engineering, education, psychology, art, medical sciences, business, literature, linguistics, management, law, and physics. Of the 522 students, 485 students completed the survey. Three hundred and fifty-two students took paper version, and 133 students took online version. Of
the 485 students who completed the survey, 380 students’ responses passed reliability checks and attention checks, and their responses were used for later data analyses. Students who took survey online received 5RMB for their participation (internet fee charged by hour).

In a specific way, the Chinese sample consisted of students from 9 universities, which included:

1) Hunan University: Thirty students enrolled in construction class completed paper version of survey. Of the 30 students, 18 cases passed the reliability checks and attention checks, and were used for data analyses.

2) Guilin University of Technology: One hundred students enrolled in business class completed paper version of survey. Of the 100 students, 78 cases passed the reliability checks and attention checks, and were used for data analyses.

3) Guangxi Normal University: Eighty-nine students enrolled in education class and business class completed online version of survey. Students received 5RMB for their participation (cost of internet). Of the 89 students, 81 cases passed the reliability checks and attention checks, and were used for data analyses.

4) Guangxi Medical University: Forty-nine students completed paper version of survey. Of the 49 students, 30 cases passed the reliability checks and attention checks, and were used for data analyses.

5) Guangxi University of Finances and Economics: Twenty-five students completed paper version of survey. Of the 25 students, 16 cases passed the reliability checks and attention checks, and were used for data analyses.

6) Guangxi University of Nationalities: Twenty-five students completed paper version
of survey. Of the 25 students, 23 cases passed the reliability checks and attention checks, and were used for data analyses.

7) Guangxi Traditional Medical University: Twenty-five students completed paper version of survey. Of the 25 students, 8 cases passed the reliability checks and attention checks, and were used for data analyses.

8) Guangxi Teachers Education: Sixty-seven students completed survey, including 44 students who complete online version of survey and 23 who took paper version of the survey. Of the 67 students, 39 students taking online version and 8 students taking paper version passed the reliability checks and attention checks, and their responses were used for data analyses.

9) Guangxi University: Ninety-nine students completed paper version of survey. Of the 99 students, 79 cases passed the reliability checks and attention checks, and were used for data analyses.

In order to better understand regional differences within the Chinese sample, students were categorized into two subgroups: rural-town and urban, based on the Chinese students’ reports with regard to where they grew up. Of the 380 Chinese students, they were 252 rural-town students and 111 urban students.
Table 5

Brief Demographic Description of Each Sample

<table>
<thead>
<tr>
<th>Samples</th>
<th>Gender</th>
<th>Education Level</th>
<th>Area</th>
<th>Pattern</th>
<th>Version</th>
<th>Alone/Group</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>M</td>
<td>Fr</td>
<td>So</td>
<td>J</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>Sample B (N=250)</td>
<td>164</td>
<td>86</td>
<td>13</td>
<td>98</td>
<td>110</td>
<td>26</td>
<td>3</td>
</tr>
<tr>
<td>C_Univ. 1 (N=18)</td>
<td>14</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>18</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>C_Univ. 2 (N=78)</td>
<td>56</td>
<td>22</td>
<td>4</td>
<td>74</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>C_Univ. 3 (N=81)</td>
<td>63</td>
<td>18</td>
<td>-</td>
<td>15</td>
<td>45</td>
<td>21</td>
<td>-</td>
</tr>
<tr>
<td>C_Univ. 4 (N=30)</td>
<td>15</td>
<td>15</td>
<td>18</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>C_Univ. 5 (N=16)</td>
<td>6</td>
<td>10</td>
<td>7</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>C_Univ. 6 (N=23)</td>
<td>11</td>
<td>12</td>
<td>2</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>C_Univ. 7 (N=8)</td>
<td>7</td>
<td>1</td>
<td>-</td>
<td>3</td>
<td>5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>C_Univ. 8 (N=47)</td>
<td>37</td>
<td>10</td>
<td>5</td>
<td>28</td>
<td>12</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>C_Univ. 9 (N=79)</td>
<td>42</td>
<td>36</td>
<td>78</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. F=Female; M=Male; Fr=Freshman; So=Sophomore; J=Junior; S=Senior; O=Other; R_T=Rural & Town; S=Suburban; U=Urban; P=Paper; OL=Online; C-F=Confucian Self-scale goes first; M-F=Moral Judgment scale goes first; A=Took survey alone; Group=Took survey when having someone else around; M=Mean; SD=Standard Deviation. C_Univ. = Chinese sample. University (Sample C).
**Procedure.** There were four scales administrated in this study, and thus theoretically, sequence effect may occur. In order to avoid sequence effects of the two measurements (the Confucians self-scale and the DIT-2 measurement) on the following self-reported behavior measurement (behavioral tendency and attitude toward behavioral outcome) and social desirability, two versions were of questionnaires were provided. That is, one version began with the Confucian self-scale, and then DIT-2, behavior measurement, and social desirability. The other version started with DIT-2, and then the Confucian self-scale, behavior measurement, and social desirability. In addition, because not every student in Chinese Campuses is provided free access to internet, an alternative way – paper version of questionnaire was provided to students. Meanwhile, American students were also provided paper version of questionnaire, which allowed the patterns of taking survey for both the Chinese and the American samples were comparable and equivalent. Thus, patterns of taking survey include paper pattern and online pattern.

**Participant recruitment.** For U.S. students, the investigator introduced the study before classes and recruited participants. Each potential participant received a copy of invitation letter (please see the Appendix E). If he or she was interested in taking this survey, he or she contacted the investigator to get the link for taking online survey. The participants were randomly allocated the link for a version of survey. Of the classes recruited, two classes were provided paper version of questionnaires. Students were also randomly assigned versions of survey. Students who completed survey
received class credits for their participation.

For the Chinese students who took online survey, Chinese instructors announced an invitation to their students. Students contacted the investigator for the link to take survey if they showed interest in it. For the Chinese students who took paper survey, Chinese instructors briefly introduced the study to students and distributed the paper version of survey to them. Students voluntarily completed survey if they were willing to help. Two versions of survey were randomly assigned to the students. After students completed survey, Chinese instructors gathered questionnaires and mailed them to the investigator. No students’ personal information was identified, and their instructors didn’t know students’ responses. Data was analyzed according to the data analysis strategies.

**Data analysis strategies.** First, descriptive statistics, such as including means and frequencies, were computed. Confirmatory Factor Analysis (CFA) approach was used to confirm theoretically defined components of the Confucian self. That is, CFA sought to further confirm the validity of hypothesized model of the Confucian self. Two conceptual variables of the Confucian self (i.e., broadening process and deepening process) were measured and their factor loadings were calculated, respectively. Latent variables of the moral behavioral tendencies and attitudes toward behavioral outcomes were explored via self-reported daily behavioral activities, such as cheating and social cooperation, and how these behavioral outcomes were acceptable to them.
Second, to check multicollinearity between independent variables, as well as to examine how these independent variables correlated with moral behavioral tendency, bivariate correlations were calculated using Pearson’s correlation coefficients.

Third, Two-Way ANOVA ($2 \times 2$) was used to examine cross-cultural differences in terms of nationality (China, U.S.) and gender (female, male) on moral judgment development, Confucian self-development, moral behavioral tendencies, attitudes toward behavioral outcomes, and social desirability. Similarly, Two-Way ANOVA ($2 \times 2$) was used as well to investigate regional differences within Chinese subgroups (urban and rural-town) and gender (female and male) on moral judgment development, Confucian self-development, moral behavioral tendencies, attitudes toward behavioral conducts, and social desirability. The demographic variables (educational level and gender) and social desirability as covariate were controlled for differences in these variables. SPSS version 20 was used for analyses.

Last, confirmatory factor analysis approach was utilized to identify latent variables of the Confucian self as well as moral behavioral tendencies and attitudes toward behavioral outcomes. Structural equation modeling (SEM) approach was employed to determine relationships among moral judgment, the Confucian self, and outcome variables (moral behavior tendencies and attitudes toward behavioral outcomes). Factor loading of each observed variable was calculated to indicate each latent variable (including the Confucian self, moral behavioral tendencies, and attitudes toward behavioral outcomes). SEM models were produced for the Chinese students and the U.S. students, respectively. Structure coefficients of moral judgment
and the Confucian self were calculated for their own significance in predicting moral
behaviors and tendencies and the attitudes. Israel version 8.72 was used for CFA and
SEM analyses.
CHAPTER FOUR

RESULTS

Statement of Data Results

Means and standard deviations of the Confucian self scores, moral schema scores, moral behavioral tendency scores, attitude toward misconduct scores, and social desirability scores were calculated for in terms of nationality, gender, and Chinese geographical area. Indices of P scores and N2 scores for moral judgment in terms of schemas were analyzed in a standard way (Bebeau & Thoma, 2003). These statistical results provided a general picture of scores of interest for the Chinese cohort and the American cohort, respectively, which aided further in understanding different associations among the Confucian self, moral judgment development, and behavioral tendencies and attitudes toward behavioral outcomes. This chapter stated results responding to research questions in Chapter Two. Generally speaking, these research questions were addressed in three sections, including Section One for Questions 1-3, which focused on cross-cultural difference with regard to Confucian self-development, moral judgment development, behavioral tendencies and attitudes toward behavioral outcomes, Section Two for Questions 4-5, which explored differences between the Chinese rural-town and urban cohorts on Confucian self-development, moral judgment development, and behavioral tendencies, and Section Three for Questions 6-8, which attempted to figure out predictive relationships among Confucian
self-development, moral judgment development and behavioral tendencies across cultures (Chinese versus. American) and Chinese regions (rural-town cohort verse urban cohort). In order to test whether the Confucian self-measure differentiates groups who ought to differ on the measure, supplemental evidence was provided through examining the differences in terms of students’ level of Confucian knowledge (see Appendix I).

**Reliability for Each Scale**

Overall, the Confucian self-measure demonstrated a good reliability (Cronbach’s Alpha), $\alpha = .929$ (N=602, including Chinese students and American students). When computed separately by group, Alpha indicated good reliability $\alpha = .923$ (N=352) for the Chinese group, and $\alpha = .944$ (N=250) for the American group. Reliability of DIT-2 for assessing moral judgment was found to be somewhat low $\alpha = .459$ (N=630) in general. More specifically, reliability of DIT-2 was found to be $\alpha = .422$ (N=380) for the Chinese group, and $\alpha = .462$ (N=250) for the American group, respectively. However, low reliabilities were probably the results from using the short form (3-story version) of DIT-2. In other words, it was possible that only three scenarios of DIT-2 (less than 5 scenarios for full DIT-2) used to assess students’ moral judgment may bring about lower reliability. As mentioned in Chapter two, DIT-2 has demonstrated its reliability to be acceptable (greater than .6, and generally .7) with a variety of empirical studies (e.g., Rest, et al., 1999a, 1999b, Rest, et al., 2000). According to Spearman-Brown formula ($r_{kk} = k(r_{11}) / [1 + (k - 1)r_{11}]$), please see
Appendix F for details) on length of items, it is expected to obtain a .06 reliability with 5 scenarios for DIT-2. At this point, it could be safe to confirm DIT-2 scores were reliable for later advanced analyses in this study. Additionally, it has been noted that the DIT yields an underestimate of the internal consistency given that Cronbach’s Alpha treats the 5 items with 3 items as a measure tool.

The results showed a satisfactory reliability of moral behavioral tendency test, $\alpha = .835$ (N=623) in general. Its reliability was found to be satisfactory for $\alpha = .805$ (N=373) the Chinese group, and $\alpha = .888$ (N=250) for the American group as well. Overall reliability of attitudes toward behavioral outcomes was $\alpha = .86$ (N=630).

Results again demonstrated a satisfactory good reliability of social desirability for the Chinese cohort, $\alpha = .869$ (N=380), and for the American cohort, $\alpha = .85$ (N=250), respectively. The reliability of social desirability was found to be acceptable $\alpha = .647$ (N=623) in general. Its reliability was $\alpha = .635$ (N=373) for the Chinese group, and $\alpha = .722$ (N=250) for the American group, which were acceptable.

**Section One: Cross Cultural Difference**

As stated earlier, Confucian ethics places emphasis on Confucian self-development, whereas Western ethics stresses on the application of a moral rationale. The main question of this section is how does the moral development of modern Chinese people compare with their American peers. In addition, very few empirical studies provided knowledge about Westerners’ moral development in terms of an Eastern moral system. Thus, it still remains a puzzle whether Western students
develop an implicit understanding of Confucian self of *ren* without direct training in Confucian principles. In addition to the focus on ethical systems, this section contrasts the Chinese and the American groups on the measure of behavioral tendencies and attitudes toward behavioral outcomes. The specific questions are as follows:

**Question 1:** How does a measure of the Confucian self describe contemporary Chinese undergraduate students?

**Question 2:** Do Westerners develop a sense of *ren* without direct training in Confucian principles?

**Confucian self.** One of purposes in this study was to explore how today’s Chinese students develop Confucian self of *ren* with little direct exposure to Confucian principles and whether American students develop Confucian self of *ren* without direct training in Confucian principles. More specifically, this study tested, to what extent, contemporary Chinese students identify themselves as Confucian self as theoretically hypothesized and how American students differed from modern Chinese young people in terms of Confucian self of *ren*. In order to answer these questions, confirmatory factor analysis approach was employed to detect whether the factor structures of the measure were similar across groups. Confirmatory factor analysis approach used in this study is an approach that attempts to determine theoretical constructs of the Confucian self of *ren*. This approach allows for specification of relationships among the eight indicators of the latent variables of the Confucian self in terms of broadening process and deepening process, which may aid in better
understanding of construct of the Confucian self. In addition, the CFA model of the Confucian self would serve as a predecessor to SEM models (Brown, 2006) that identify structural associations among the latent variables of the Confucian self of ren, moral judgment and behavioral outcomes. Thus, before exploring structural relationships among variables of interest, there was a need to confirm psychological constructs of the Confucian self of ren.

Internal consistency reliability estimates of each observed scale of the Confucian self was displayed in Table 6. The results revealed that reliabilities of the eight observed indicators were from acceptable to satisfactory for both the Chinese and American cohorts. It is worth mentioning that item 6 addressing the family dimension, was deleted for the American sample in order to have a higher reliability for the family subscale (see Table 6). Similarly, item 6 was deleted for the Chinese sample to insure an equal number of items for both the American and Chinese students. Accordingly, only five items were kept for calculating the family subscale for both the American and the Chinese cohorts.

---

8 Item 6 is: These characteristics do not suggest that I yell at my parents.
Mean differences on the Confucian self by cross-cultural context. Descriptive statistics of the Confucian self of ren were computed for both the Chinese students and the American students by gender (Table 7 & Figure 2). Generally, Chinese subjects reported higher scores than their American peers on the world, body, soul, and spirits, and reported lower scores on the family, community, country, and mind. Focusing on gender, Chinese females reported higher scores on the family, community, country, mind, soul, and spirit than their male counterparts, and they reported lower scores on the world and body than Chinese males. American females reported higher scores on all variables than their male peers.
The mean differences observed in the Table 7 were tested using a two-way ANOVA (nationality by gender). These analyses indicated a significant interaction effect between nationality and gender on the community subscale, $F(1,625)=5.55$, $p = .02$, $\eta^2=.009$, as well as a significant tendency of interaction effect on the broadening process measure, $F(1,625)=2.85$, $p = .09$, $\eta^2=.004$. Significant main effects for nationality were found on the subscales of the family, $F(1,625)=35.13$, $p < .001$, $\eta^2 = .243$, world, $F(1,625)=16.23$, $p < .001$, $\eta^2 = .025$, body, $F(1,625)=7.43$, $p < .01$, $\eta^2 = .012$, mind, $F(1,625)=38.95$, $p < .001$, $\eta^2 = .059$, spirit, $F(1,625)=43.07$, $p < .001$, $\eta^2 = .064$, broadening process, $F(1,625)=6.45$, $p = .01$, $\eta^2 = .037$. Additionally, a significant tendency of main effect for nationality was noted on the Confucian self.

---

9 Eta-squared $\eta^2$ symbolizes effect size and is interpreted by its size, including small ($0 \sim .1$), medium ($1 \sim .3$), large ($3 \sim .5$), and very large ($7 \sim$).
(total score), $F(1, 625) =3.81, p = .051, \eta^2 = .016$. In general, these results suggest that the Chinese students were more likely than their American peers to score higher on the broadening self that extends ren to a larger scope (world) and to deepen comprehension self of ren (body level and spirit level). On the other hand, The Chinese students appeared not to reach the level of mind of ren as did the American students.

The significant effects for gender were noted on the subscales of the family, $F(1, 625) =4.12, p = .04, \eta^2 = .016$, country, $F(1, 625) = 8.60, p < .01, \eta^2 = .014$, and mind, $F(1, 625) =13.65, p < .01, \eta^2 = .021$. The results indicated that both the Chinese and the American females were more likely than their male counterparts to score higher on the broadening self of ren, on the family and country subscales, and the mind level of a deepening comprehension of the self of ren.

Descriptive analyses provided a basic comparison of the Confucian self of ren between the American and the Chinese cohorts. Visual and further statistical differences of Confucian self-development between these two samples were compared in the subsequent results.

**Correlations between Confucian subscales by cultural context.** Correlations among eight indicators of the Confucian self of ren were displayed in Table 8 for the American and the Chinese groups, respectively. For the Chinese sample, correlation among deepening process suggested moderate relationship, whereas correlations among the deepening process ranged from low to moderate, and correlations between
the variable of broadening process and the variable of deepening process ranged from low to moderate. Similar patterns of correlations were noted in the American sample, except for the finding that correlations among broadening process ranged from moderate to high. All correlations were found to be significant at the .05 level for both groups. However, results of cross-cultural comparisons on the magnitudes of the relationships as assessed using the Fisher’s Z test of independent correlations indicated that correlations were significantly different between the following subscale scores (Table 8): family and community, \( Z = -3.52, p < .01 \), family and country, \( Z = -2.20, p = .03 \), family and world, \( Z = -3.03, p < .01 \), family and mind, \( Z = -2.14, p = .03 \), family and soul, \( Z = -3.29, p < .01 \), family and spirit, \( Z = -2.03, p = .03 \), community and country, \( Z = -3.03, p < .01 \), and country and mind, \( Z = -3.31, p < .01 \). These findings suggested that, although relationships among observed variables of the Confucian self were similar in the Chinese and the American samples, the American sample had stronger associations than those of the Chinese samples, between the family and community, family and country, family and world, family and mind, and family and soul.
### Table 7
Mean and Standard Deviation for the Confucian Self and Its Sub-Scales by Gender and Nationality

<table>
<thead>
<tr>
<th>Nationality</th>
<th>G</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>F</td>
<td>251</td>
<td>38.61</td>
<td>4.87</td>
<td>44.75</td>
<td>5.16</td>
<td>43.69</td>
<td>5.96</td>
<td>34.10</td>
<td>8.10</td>
<td>49.58</td>
<td>6.51</td>
<td>36.86</td>
<td>6.07</td>
<td>24.78</td>
<td>5.32</td>
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<tr>
<td></td>
<td>M</td>
<td>128</td>
<td>37.78</td>
<td>5.74</td>
<td>44.66</td>
<td>5.58</td>
<td>42.93</td>
<td>6.82</td>
<td>34.12</td>
<td>5.84</td>
<td>44.95</td>
<td>8.77</td>
<td>47.73</td>
<td>6.21</td>
<td>36.80</td>
<td>6.77</td>
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<tr>
<td></td>
<td>T</td>
<td>379</td>
<td>38.33</td>
<td>5.19</td>
<td>44.72</td>
<td>6.27</td>
<td>34.11</td>
<td>5.68</td>
<td>44.71</td>
<td>8.32</td>
<td>48.96</td>
<td>6.46</td>
<td>36.84</td>
<td>6.30</td>
<td>24.67</td>
<td>5.46</td>
</tr>
<tr>
<td>American</td>
<td>F</td>
<td>164</td>
<td>39.20</td>
<td>6.28</td>
<td>45.77</td>
<td>6.42</td>
<td>45.15</td>
<td>6.82</td>
<td>34.12</td>
<td>5.84</td>
<td>44.95</td>
<td>8.77</td>
<td>47.73</td>
<td>6.21</td>
<td>36.80</td>
<td>6.77</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>86</td>
<td>38.27</td>
<td>6.80</td>
<td>43.16</td>
<td>9.09</td>
<td>42.35</td>
<td>9.61</td>
<td>51.08</td>
<td>8.85</td>
<td>35.13</td>
<td>7.43</td>
<td>20.86</td>
<td>5.67</td>
<td>304.74</td>
<td>45.17</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>250</td>
<td>38.88</td>
<td>6.56</td>
<td>44.88</td>
<td>7.53</td>
<td>44.26</td>
<td>7.26</td>
<td>32.32</td>
<td>6.11</td>
<td>42.91</td>
<td>8.75</td>
<td>52.72</td>
<td>7.56</td>
<td>36.34</td>
<td>7.39</td>
</tr>
</tbody>
</table>

Note:
1. There are 5 items of variable of family kept for calculating means and standard deviation for both the American and the Chinese cohorts.
2. Fam=family, Com=community, Cntry= country, Wld= world, CS= Confucian self.
3. G=Gender, F=female, M=Male, T=Total

### Table 8
Correlations among Indicators of the Confucian Self of Chinese Students and American Students

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Family</td>
<td>–</td>
<td>.80**</td>
<td>.75**</td>
<td>.67**</td>
<td>.65**</td>
<td>.57**</td>
<td>.63**</td>
<td>.53**</td>
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<tr>
<td>2. Community</td>
<td>.67**</td>
<td>–</td>
<td>.84**</td>
<td>.70**</td>
<td>.60**</td>
<td>.73**</td>
<td>.55**</td>
<td>.43**</td>
</tr>
<tr>
<td>3. Country</td>
<td>.66**</td>
<td>.75**</td>
<td>–</td>
<td>.76**</td>
<td>.64**</td>
<td>–</td>
<td>.63**</td>
<td>.53**</td>
</tr>
<tr>
<td>4. World</td>
<td>.51**</td>
<td>.64**</td>
<td>.69**</td>
<td>–</td>
<td>.67**</td>
<td>.54**</td>
<td>.60**</td>
<td>.53**</td>
</tr>
<tr>
<td>5. Body</td>
<td>.54**</td>
<td>.63**</td>
<td>.68**</td>
<td>.66**</td>
<td>–</td>
<td>.38**</td>
<td>.61**</td>
<td>.60**</td>
</tr>
<tr>
<td>6. Mind</td>
<td>.44**</td>
<td>.53**</td>
<td>.54**</td>
<td>.44**</td>
<td>.39**</td>
<td>–</td>
<td>.47**</td>
<td>.25**</td>
</tr>
<tr>
<td>7. Soul</td>
<td>.44**</td>
<td>.57**</td>
<td>.58**</td>
<td>.57**</td>
<td>.59**</td>
<td>.41**</td>
<td>–</td>
<td>.62**</td>
</tr>
<tr>
<td>8. Spirit</td>
<td>.40**</td>
<td>.50**</td>
<td>.56**</td>
<td>.61**</td>
<td>.55**</td>
<td>.34**</td>
<td>.56**</td>
<td>–</td>
</tr>
</tbody>
</table>

Note: **: p< .01. American sample (n=250) is presented above the diagonal. Chinese sample (n=380) is presented below. Correlations highlighted with the same color indicate significant Z-value (p<.05) between the two cohorts, suggesting significantly different correlations between two variables for the Chinese and the American students.
Confirmatory factor analyses of the Confucian self-measure by cultural context.

Theoretical confirmatory factor models of the Confucian self were generated for the Chinese and the American samples, respectively. Results provided selected model-fit indices, including Chi-square $\chi^2$ (19, N=380) = 98.44, $p<.001$, and RMSEA = .11 (RMSEA < .08 is acceptable, and RMSEA < .05 is good) for the Chinese cohort (Model 1), and Chi-square $\chi^2$ (19, N=250) = 235.48, $p<.001$, and RMSEA = .21 for the American cohort (Model 2). Goodness-of-fit index (GFI) was found to be .93 for the Chinese sample, and .81 for the American sample. These findings failed to confirm the proposed model of the Confucian self. Using the cut-off rule “GFI > .95 is acceptable”, it was obviously that both the results of the Model 1 and the Model 2 did not provide solid supports for good confirmatory factor fitting models of the Confucian self for both the Chinese and the American cohorts. In addition, as portrayed in Model 1 (Chinese) and Model 2 (American), it was obvious that correlation between broadening process and deepening process was found to be extremely high, $r = .96$ (N=380) for the Chinese students and $r = .99$ (N=250) for the American students. It appeared that both the Chinese students and the American students did not successfully distinguish broadening process from deepening process as measured by the scale. Instead, both the groups seemed to view these two theoretical components of the Confucian self of ren as one unit.

The CFA results call into question how many components of the Confucian self are apparent in the two cohorts. Given the failure of the theoretical model to fit the data, an exploratory factor analysis was applied to determine an appropriate number
of factors for the Confucian self for both cohorts.

Figure 3
Model 1 Confirmatory Factor Model of the Twofold Confucian Self for the Chinese Sample

Figure 4
Model 2 Confirmatory Factor Model of the Twofold Confucian Self for the American Sample

Exploratory factor analysis for the Confucian self. Exploratory factor analysis (EFA) is an approach “used to determine the appropriate number of factors to be extracted in subsequent analysis” (Brown. 2006, pp. 23) and it is helpful in selecting
proper factors for a factor model. EFA employed in this study was used to extract observed variables and determine a proper number of factors of the Confucian self of ren. Its goal was to reduce the 8 observed variables into a smaller number of latent variables of the Confucian self. According to the results (Table 9), all 8 variables loaded onto one factor and all loadings were relevant for both the American and the Chinese cohorts. Using one popular criteria for determining an appropriate number of factor selection “the eignevalues > 1.0 rule”, it was obvious that eight variables all associated with identifying self as one component, named the Confucian self.

Contrary to the twofold modules of the Confucian self, the results of this study suggested that both the Chinese and the American cohorts appeared to fail to make a distinction between broadening process and deepening process of the Confucian self and they were more likely to regard the Confucian self as one unit. These findings further support the view that both cultures indicated a one-component description of the Confucian self.

Table 9

Component Loadings of Eight Measure Variables of the Confucian Self for the American and the Chinese Cohorts

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>American</td>
<td>Chinese</td>
</tr>
<tr>
<td>Family</td>
<td>.87</td>
<td>.75</td>
</tr>
<tr>
<td>Community</td>
<td>.88</td>
<td>.86</td>
</tr>
<tr>
<td>Country</td>
<td>.91</td>
<td>.88</td>
</tr>
<tr>
<td>World</td>
<td>.85</td>
<td>.83</td>
</tr>
<tr>
<td>Body</td>
<td>.79</td>
<td>.81</td>
</tr>
<tr>
<td>Mind</td>
<td>.72</td>
<td>.64</td>
</tr>
<tr>
<td>Soul</td>
<td>.78</td>
<td>.75</td>
</tr>
<tr>
<td>Spirit</td>
<td>.68</td>
<td>.72</td>
</tr>
<tr>
<td>Eigenvalues</td>
<td>5.30</td>
<td>4.90</td>
</tr>
<tr>
<td>Percentage of total variance</td>
<td>66.21</td>
<td>61.24</td>
</tr>
<tr>
<td>Number of test measures</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>
As stated above, confirmatory factor analysis was again conducted to specify relationships among eight observed variables of the Confucian self and to identify their associations with a single latent variable of the Confucian self. Selected model-fit indices were presented below (Table 10). For the Chinese students, in original model (Model 3, Figure 5), the results showed that Chi-square $\chi^2$ (called a measure of badness fit) was found to be 110.15, with degree freedom of 20, $p<.001$, RMSEA=.109 (RMSEA<.08 is acceptable). Goodness-of-fit index (GFI) was found to .93, which was below the acceptable range of model fit (GFI >.95), and Standardized RMR was .041 (Standardized RMR: 0 is perfect fit, SRMR<.05 is good). Compared to the original model, model-fit indices in the modified model presented Chi-square $\chi^2$ (16, N=380)=35.53, $p<.01$, RMSEA = .057, and Standardized RMR = .025, which was lower than Standardized RMR was found .041 in the original model, indicating a better fitting model than the original one. Although Chi-square in the modified model was still significant, it is important to note that the acceptability of the CFA model does not merely depend on whether or not Chi-square is significant. This is because Chi-square is sensitive to a large sample size (N>100), and non-significant Chi-square in this model may have been caused due to its large selected population in this study (N=380). Furthermore, the goodness-of-fit index (GFI) was .98 and no extra model modifications were suggested for modified model. Thus, this modified model would be the final best fitting confirmatory factor model of the Confucian self for the Chinese cohort and it would be reasonable to address the relationships among observed variables and latent variable of the Confucian self were
well represented in Model 4 (Figure 6).

![Diagram of Model 4](image.jpg)

> Chi-Square=35.53, df=16, P-value=0.0036, RMSEA=0.057

Figure 6
*Model 4 Modified Confirmatory Factor Model of the Confucian Self with a Single Latent Variable for the Chinese Sample*

For the American sample, Chi-square $\chi^2$ was found to be 235.65, with degree of freedom of 20, and $p < .001$, RMSEA was found to be .208, GFI= .81, and Standard RMR = .073 in original model of the Confucian self (Model 5, Figure 7).
Alternatively, in the modified model, Chi-square $\chi^2$ was found to be 11.69, $p=.31$, with degree freedom of 10. RMSEA was found to be .026 (smaller than .05), with Standardized RMR =.014, GFI =.99, and no additional correlations between observed variables were indicated for the modified model (Model 6, Figure 8). Model comparison (Table 10) indicated that decrease in model-fit indices of Chi-square, RMSEA and Standardized RMR of the revised model of the Confucian self obviously demonstrated a better fitting model than the original one for the American cohort. Such results again confirmed the relationships among observed variables of the Confucian self and their associations with one latent variable of the Confucian self. As stated above, the results apparently did not well fit theoretical assumption of the Confucian self of ren with two modules, i.e. broadening process and deepening process. Instead, both the modern Chinese students and the American students appeared to regard the Confucian self as a one-component construct.

Figure 7
*Model 5 Original Confirmatory Factor Model of the Confucian Self with a Single Latent Variable for the American Sample*
Chi-Square=11.69, df=10, P-value=0.30628, RMSEA=0.026

Figure 8
Model 6 Modified Confirmatory Factor Model of the Confucian Self with a Single Latent Variable for the American Sample

Table 10
Selected Goodness-of-Fit Indices of Confirmatory Factor Models of the Confucian Self for the Chinese and the American Cohorts

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>p value</th>
<th>GFI</th>
<th>RMSEA</th>
<th>Standardized RMR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chinese (N=380)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original Model</td>
<td>110.15</td>
<td>20</td>
<td>&lt;.001</td>
<td>.93</td>
<td>.109</td>
<td>.041</td>
</tr>
<tr>
<td>Modified Model</td>
<td>35.53</td>
<td>16</td>
<td>&lt;.01</td>
<td>.98</td>
<td>.057</td>
<td>.025</td>
</tr>
<tr>
<td><strong>American (N=250)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original Model</td>
<td>235.65</td>
<td>20</td>
<td>&lt;.001</td>
<td>.81</td>
<td>.208</td>
<td>.073</td>
</tr>
<tr>
<td>Modified Model</td>
<td>11.69</td>
<td>10</td>
<td>.306</td>
<td>.99</td>
<td>.026</td>
<td>.014</td>
</tr>
</tbody>
</table>

Note. Significant Chi-square may be caused because of a large sample size (N>100).

As summarized in Table 11, the modified confirmatory factor models showed medium to high loadings to the latent variable of the Confucian self for both the Chinese and the American groups, and all loadings were significant at the .05 level.

Visually, the Chinese confirmatory factor model (Model 4) appeared to differ from that of the American cohort (Model 6). On the other hand, although there was no
significant mean difference on the indicators of the Confucian self (Figure 2) between
the Chinese and the American samples, the CFA model comparisons indicated a
significant difference between the Chinese view of the Confucian self as compared to
the American students. For the American sample, the set of variables were viewed
more similarly and were more strongly correlated with one another.

Table 11
*Standardized Estimates for Single Factor Confirmatory Model of the Confucian Self for
the Chinese (N = 380) and the American Students (N = 250)*

<table>
<thead>
<tr>
<th>Observed variable</th>
<th>Chinese Original Model</th>
<th>Chinese Modified Model</th>
<th>American Original Model</th>
<th>American Modified Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor loadings:</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family</td>
<td>.72</td>
<td>.70</td>
<td>.85</td>
<td>.87</td>
</tr>
<tr>
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<td>World</td>
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<td>Body</td>
<td>.78</td>
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<td>.74</td>
</tr>
<tr>
<td>Mind</td>
<td>.58</td>
<td>.60</td>
<td>.73</td>
<td>.64</td>
</tr>
<tr>
<td>Soul</td>
<td>.69</td>
<td>.69</td>
<td>.70</td>
<td>.71</td>
</tr>
<tr>
<td>Spirit</td>
<td>.66</td>
<td>.64</td>
<td>.59</td>
<td>.61</td>
</tr>
<tr>
<td>Measurement error variances:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family</td>
<td>.49</td>
<td>.51</td>
<td>.28</td>
<td>.24</td>
</tr>
<tr>
<td>Community</td>
<td>.29</td>
<td>.30</td>
<td>.20</td>
<td>.37</td>
</tr>
<tr>
<td>Country</td>
<td>.23</td>
<td>.22</td>
<td>.15</td>
<td>.25</td>
</tr>
<tr>
<td>World</td>
<td>.37</td>
<td>.38</td>
<td>.33</td>
<td>.23</td>
</tr>
<tr>
<td>Body</td>
<td>.39</td>
<td>.38</td>
<td>.48</td>
<td>.45</td>
</tr>
<tr>
<td>Mind</td>
<td>.66</td>
<td>.64</td>
<td>.47</td>
<td>.59</td>
</tr>
<tr>
<td>Soul</td>
<td>.52</td>
<td>.53</td>
<td>.51</td>
<td>.49</td>
</tr>
<tr>
<td>Spirit</td>
<td>.59</td>
<td>.60</td>
<td>.65</td>
<td>.62</td>
</tr>
</tbody>
</table>

Note: All factor loadings were significant at the .05 level.

Accordingly, one may wonder whether Chinese students developed a different
sense of the Confucian self from that of American students when it came to the
Confucian self as a unit. A model comparison analysis was performed on the two CFA solutions, and the results indicated that global chi-square was $\chi^2 = 165.53$, with degree of freedom = 42, and $p<.001$ (Table 12 & Table 13). The difference in Chi-square $\triangle \chi^2$ (MC 3, at Table 12) was found to be 100.41, at the .05 level of significance, indicating factor loadings to the latent variable of the Confucian self were equal and different error variances were allowed between the two cohorts. In other words, the Chinese sample did not differ from the American sample in perceiving the sense of the Confucian self in general, yet these two cohorts distinguished from each other in understandings of correlations between the indicators of the Confucian self.

Table 12

<table>
<thead>
<tr>
<th>Model comparison</th>
<th>Factor loadings</th>
<th>Error variances</th>
<th>Chi-square $\chi^2$</th>
<th>df</th>
<th>$p$ value</th>
<th>RMSESA</th>
<th>$\Delta \chi^2$</th>
<th>$\Delta df$</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC 1</td>
<td>E</td>
<td>E</td>
<td>275.94</td>
<td>52</td>
<td>&lt;.001</td>
<td>.117</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MC 2</td>
<td>U</td>
<td>E</td>
<td>211.20</td>
<td>44</td>
<td>&lt;.001</td>
<td>.11</td>
<td>64.74</td>
<td>8</td>
</tr>
<tr>
<td>MC 3</td>
<td>E</td>
<td>U</td>
<td>165.53</td>
<td>42</td>
<td>&lt;.001</td>
<td>.096</td>
<td>110.41</td>
<td>10</td>
</tr>
<tr>
<td>MC 4</td>
<td>U</td>
<td>U</td>
<td>150.64</td>
<td>34</td>
<td>&lt;.001</td>
<td>.085</td>
<td>125.30</td>
<td>18</td>
</tr>
</tbody>
</table>

Note:
1. MC 1=Type of model comparison 1, MC 2= Type of model comparison 2, MC 3= Type of model comparison 3, MC 4= Type of model comparison 4
4. For model (MC 1) with equal factor loadings and equal error variances, $\chi^2=275.94$, $df=52$, $p<.001$.
5. $\triangle \chi^2=100.41$, $\triangle df=10$, at the .05 level of significance ($\chi^2=18.307$, $df=10$).
6. Difference between model comparisons ($\chi^2$) was compared with $\chi^2$ Table$^{10}$.

$^{10}$ $\chi^2$ Table: see Appendix H.
Table 13  
*Summary for Model Comparison of Confirmatory Factor Model of the Confucian Self between the Chinese Cohort (N=380) and the American Cohort (N=250)*

<table>
<thead>
<tr>
<th>Observed variable</th>
<th>Chinese (Model 4)</th>
<th>American (Model 6)</th>
<th>Equal factor loading and unequal error covariance model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>.70</td>
<td>.87</td>
<td>.77</td>
</tr>
<tr>
<td>Community</td>
<td>.83</td>
<td>.79</td>
<td>.82</td>
</tr>
<tr>
<td>Country</td>
<td>.88</td>
<td>.87</td>
<td>.89</td>
</tr>
<tr>
<td>World</td>
<td>.78</td>
<td>.88</td>
<td>.81</td>
</tr>
<tr>
<td>Body</td>
<td>.79</td>
<td>.74</td>
<td>.77</td>
</tr>
<tr>
<td>Mind</td>
<td>.60</td>
<td>.64</td>
<td>.68</td>
</tr>
<tr>
<td>Soul</td>
<td>.69</td>
<td>.71</td>
<td>.70</td>
</tr>
<tr>
<td>Spirit</td>
<td>.64</td>
<td>.61</td>
<td>.62</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>$\chi^2$</th>
<th>Degree of freedom</th>
<th>$p$ value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>35.53</td>
<td>16</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>11.69</td>
<td>10</td>
<td>.306</td>
</tr>
<tr>
<td></td>
<td>165.53</td>
<td>42</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note:  
1. Degrees of freedom for Chinese model and American model differ because of different error covariance correlations.  
2. All factor loadings were significant at the .05 level.

Question 3: Do Chinese undergraduate students develop a similar pattern of moral judgment with their American peers?

**Moral judgment.** Addressing moral judgment, the results showed that the Chinese students received higher overall average P scores and N2 scores than the American students; at the same time, they received lower Maintaining Norms scores and Personal Interest scores than their American peers (Table 14). For female students, Chinese had lower Maintaining Norms and Personal Interest scores yet had higher P scores and N2 scores than their American cohort. For male groups, the Chinese cohort was found to receive lower Personal Interest scores, but higher Maintaining Norms.
scores, P scores and N2 scores than the American group. Both the Chinese and American females had higher P scores and N2 scores than their male counterparts, respectively. Chinese females had higher Personal Interest and lower Maintaining Norms scores than Chinese males; whereas American females had lower Personal Interest and higher Maintaining Norms scores than their male peers. It appeared that both the Chinese and the American females indicated their preference for a more advanced moral schema than the males on DIT. Meanwhile, the Chinese females had higher Personal Interest but lower Maintaining Norms scores than their male counterparts and vice versa for the American cohort. Two-way ANOVA indicated that no significant interaction effect was found between nationality and gender across DIT-2 scores. Nevertheless, there was a statistically significant tendency for interaction effect between nationality and gender on Maintaining Norms scores, 

\[ F(1,624)=2.98, \ p = .085, \ \eta^2 = .005. \]  

Significant main effect for nationality was found on the Personal Interest scores \( F(1,624)=11.71, \ p = .001, \ \eta^2 = .018, \) P score, 

\[ F(1,624)=5.11, \ p = .024, \ \eta^2 = .008, \]  
é and N2 score, \( F(1,624)=22.54, \ p < .001, \ \eta^2 = .035. \) Overall, it appeared that the Chinese students preferred a more advanced moral schema than their American peers when reasoning about moral dilemmas. In addition, there was no significant main effect for gender across DIT indices.
Table 14
Mean and Standard Deviation for the DIT Scores (Moral Judgment) by Gender and Nationality

<table>
<thead>
<tr>
<th>Nationality</th>
<th>N</th>
<th>Personal Interest Mean</th>
<th>SD</th>
<th>Maintaining Norms Mean</th>
<th>SD</th>
<th>Post-conventional Mean</th>
<th>SD</th>
<th>N2 score Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>F</td>
<td>251</td>
<td>31.47</td>
<td>15.23</td>
<td>27.41</td>
<td>13.02</td>
<td>31.78</td>
<td>15.32</td>
<td>32.71</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>86</td>
<td>36.09</td>
<td>14.64</td>
<td>28.88</td>
<td>15.61</td>
<td>27.64</td>
<td>15.42</td>
<td>25.35</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>250</td>
<td>34.95</td>
<td>15.02</td>
<td>29.60</td>
<td>14.70</td>
<td>27.97</td>
<td>14.97</td>
<td>26.19</td>
</tr>
</tbody>
</table>

Note: N=Number, F=Female, M=Male, T=Total, SD=Standard Deviation

Moral behavioral variables.

Preliminary analyses. Confirmatory factor analysis was conducted to determine relationships of moral outcomes and its observed variables of interest. The confirmatory factor model of moral behavior consists of two parts: self-report moral behavioral tendencies and attitudes toward moral behavioral outcomes. There were five indicators of moral behavioral tendencies and five indicators of attitudes toward behavioral outcomes, respectively (discussed in methodology). This study attempted to investigate relationships between moral behavioral tendencies and attitudes toward behavior outcomes before exploring their associations with the Confucian self and moral judgment development.

Reliabilities of observed variables for moral behavioral tendencies and attitudes toward moral outcomes were also summarized for the Chinese sample (Table 15) and the American sample (Table 16), respectively. For the Chinese sample, with the
exception of the self-serving activity subscale, reliabilities of other subscales ranged from acceptable to good. It was possible that fewer items of sub-scale resulted in a low reliability of the self-serving purpose. For the American cohort, reliability of each observed variable of moral outcomes ranged from low to high.

Table 15
Descriptive Statistics and Observed Variable Reliability for the Self-Reported Behavior and the Attitudes for the Chinese Sample (N=380)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variable</th>
<th>Number of items</th>
<th>Reliability (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moral behavioral tendencies:</td>
<td>Social cooperation</td>
<td>8</td>
<td>.59</td>
</tr>
<tr>
<td></td>
<td>Cheating</td>
<td>5</td>
<td>.58</td>
</tr>
<tr>
<td></td>
<td>Stealing</td>
<td>5</td>
<td>.55</td>
</tr>
<tr>
<td></td>
<td>Self-serving</td>
<td>3</td>
<td>.25</td>
</tr>
<tr>
<td></td>
<td>Aggressive behavior</td>
<td>4</td>
<td>.56</td>
</tr>
<tr>
<td>Attitudes toward behavioral outcomes:</td>
<td>Social cooperation</td>
<td>8</td>
<td>.78</td>
</tr>
<tr>
<td></td>
<td>Cheating</td>
<td>5</td>
<td>.77</td>
</tr>
<tr>
<td></td>
<td>Stealing</td>
<td>5</td>
<td>.69</td>
</tr>
<tr>
<td></td>
<td>Self-serving</td>
<td>3</td>
<td>.51</td>
</tr>
<tr>
<td></td>
<td>Aggressive behavior</td>
<td>4</td>
<td>.81</td>
</tr>
</tbody>
</table>

Table 16
Descriptive Statistics and Observed Variable Reliability for the Self-Reported Behavior and the Attitudes for the American Sample (N=250)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variable</th>
<th>Number of items</th>
<th>Reliability (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moral behavioral tendencies:</td>
<td>Social cooperation</td>
<td>8</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>Cheating</td>
<td>5</td>
<td>.75</td>
</tr>
<tr>
<td></td>
<td>Stealing</td>
<td>5</td>
<td>.75</td>
</tr>
<tr>
<td></td>
<td>Self-serving</td>
<td>3</td>
<td>.52</td>
</tr>
<tr>
<td></td>
<td>Aggressive behavior</td>
<td>4</td>
<td>.59</td>
</tr>
<tr>
<td>Attitudes toward behavioral outcomes:</td>
<td>Social cooperation</td>
<td>8</td>
<td>.65</td>
</tr>
<tr>
<td></td>
<td>Cheating</td>
<td>5</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td>Stealing</td>
<td>5</td>
<td>.74</td>
</tr>
<tr>
<td></td>
<td>Self-serving</td>
<td>3</td>
<td>.43</td>
</tr>
<tr>
<td></td>
<td>Aggressive behavior</td>
<td>4</td>
<td>.63</td>
</tr>
</tbody>
</table>
Descriptive analyses for moral behavioral tendencies and attitudes toward behaviors. Descriptive analyses were summarized for behavioral tendencies, attitudes toward behavioral outcomes, and social desirability in Table 17 and Table 18. Compared to the American students, results presented that the Chinese students had higher scores on moral behavioral tendencies (cheating, stealing, self-serving purpose and total score of moral behavioral tendencies) and had lower scores of social cooperation and aggressive behavior (Table 17). For attitudes toward behavioral outcomes, the results showed that the Chinese students had lower scores than the American students across all variables of attitudes toward behavioral outcomes (Table 18). These unethical behavioral outcomes appeared more acceptable to the Chinese students than the American students. More specifically, with the exception of social cooperation and aggressive behavior, both the American female students and male students reported higher scores on moral behavioral tendencies and overall moral behavioral tendencies than their Chinese counterparts. Also, both the American females and males reported higher scores on acceptability of attitudes toward unethical behavioral outcomes than their Chinese counterparts. For gender difference, both the American and the Chinese females reported higher scores than their male peers on moral behavioral tendencies and acceptability of attitudes toward behavioral outcomes. For social desirability, the Chinese students reported higher scores than the American students. Both the American females and males reported lower social desirability scores than their Chinese counterparts, and both the American and the Chinese females reported lower social desirability scores than their male peers.
### Table 17

*Mean and Standard Deviation of Moral Behavioral Tendencies and Social Desirability by Nationality and Gender*

<table>
<thead>
<tr>
<th>Nationality</th>
<th>G</th>
<th>N</th>
<th>SC</th>
<th>SD</th>
<th>CT</th>
<th>SD</th>
<th>ST</th>
<th>SD</th>
<th>SS</th>
<th>SD</th>
<th>AB</th>
<th>SD</th>
<th>MB</th>
<th>SD</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td></td>
<td></td>
<td>Mean</td>
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<td></td>
<td>Mean</td>
<td></td>
</tr>
<tr>
<td>American</td>
<td>F</td>
<td>164</td>
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<td>2.98</td>
<td>23.26</td>
<td>2.15</td>
<td>23.46</td>
<td>2.11</td>
<td>11.77</td>
<td>2.16</td>
<td>18.96</td>
<td>1.60</td>
<td>113.14</td>
<td>8.97</td>
<td>7.46</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>86</td>
<td>34.55</td>
<td>3.30</td>
<td>22.74</td>
<td>2.58</td>
<td>22.06</td>
<td>3.24</td>
<td>11.63</td>
<td>1.97</td>
<td>18.29</td>
<td>1.96</td>
<td>109.27</td>
<td>10.68</td>
<td>7.60</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>250</td>
<td>35.30</td>
<td>3.13</td>
<td>23.08</td>
<td>2.32</td>
<td>22.98</td>
<td>2.64</td>
<td>11.72</td>
<td>2.10</td>
<td>18.73</td>
<td>1.76</td>
<td>111.81</td>
<td>9.75</td>
<td>7.51</td>
</tr>
<tr>
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<td>F</td>
<td>251</td>
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<td>21.29</td>
<td>2.57</td>
<td>21.97</td>
<td>1.97</td>
<td>11.51</td>
<td>1.50</td>
<td>19.43</td>
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<td>20.94</td>
<td>2.67</td>
<td>11.49</td>
<td>1.70</td>
<td>18.98</td>
<td>1.54</td>
<td>108.51</td>
<td>8.60</td>
<td>8.27</td>
</tr>
<tr>
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<td>21.20</td>
<td>2.50</td>
<td>21.62</td>
<td>2.28</td>
<td>11.50</td>
<td>1.57</td>
<td>19.28</td>
<td>1.16</td>
<td>110.24</td>
<td>7.12</td>
<td>8.12</td>
</tr>
</tbody>
</table>

Note: G=Gender, F=Female, M=Male, T=Total, N=Number, SC=Social cooperation, CT=Cheating, ST=Stealing, AB=Aggressive behavior, MB=Moral behavioral tendencies, SD=Standard Deviation. The higher score, the higher ethical behavior tendencies.

### Table 18

*Mean and Standard Deviation of Attitudes toward Behavioral Outcomes by Nationality and Gender*

<table>
<thead>
<tr>
<th>Nationality</th>
<th>G</th>
<th>N</th>
<th>SC</th>
<th>SD</th>
<th>CT</th>
<th>SD</th>
<th>ST</th>
<th>SD</th>
<th>SS</th>
<th>SD</th>
<th>AB</th>
<th>SD</th>
<th>BO</th>
<th>SD</th>
</tr>
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<td>Mean</td>
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<tr>
<td>American</td>
<td>F</td>
<td>164</td>
<td>34.01</td>
<td>2.40</td>
<td>22.48</td>
<td>2.07</td>
<td>22.45</td>
<td>2.13</td>
<td>11.83</td>
<td>1.64</td>
<td>18.73</td>
<td>1.37</td>
<td>109.50</td>
<td>7.86</td>
</tr>
<tr>
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<td>M</td>
<td>86</td>
<td>33.73</td>
<td>2.65</td>
<td>22.23</td>
<td>2.09</td>
<td>21.58</td>
<td>2.14</td>
<td>11.52</td>
<td>1.45</td>
<td>18.01</td>
<td>1.66</td>
<td>107.08</td>
<td>7.80</td>
</tr>
<tr>
<td></td>
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<td>250</td>
<td>33.92</td>
<td>2.49</td>
<td>22.39</td>
<td>2.08</td>
<td>22.15</td>
<td>2.17</td>
<td>11.72</td>
<td>1.58</td>
<td>18.48</td>
<td>1.51</td>
<td>108.67</td>
<td>7.90</td>
</tr>
<tr>
<td>Chinese</td>
<td>F</td>
<td>251</td>
<td>33.33</td>
<td>3.29</td>
<td>18.54</td>
<td>2.58</td>
<td>19.85</td>
<td>2.27</td>
<td>11.43</td>
<td>1.46</td>
<td>17.93</td>
<td>1.84</td>
<td>101.09</td>
<td>9.33</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>127</td>
<td>32.60</td>
<td>4.06</td>
<td>18.51</td>
<td>2.83</td>
<td>19.45</td>
<td>2.75</td>
<td>11.29</td>
<td>1.60</td>
<td>17.24</td>
<td>2.66</td>
<td>99.09</td>
<td>12.10</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>378</td>
<td>33.08</td>
<td>3.58</td>
<td>18.53</td>
<td>2.67</td>
<td>19.72</td>
<td>2.45</td>
<td>11.38</td>
<td>1.51</td>
<td>17.70</td>
<td>2.17</td>
<td>100.41</td>
<td>10.37</td>
</tr>
</tbody>
</table>

Note: G=Gender, F=Female, M=Male, T=Total, N=Number, SC=Social cooperation, CT=Cheating, ST=Stealing, AB=Aggressive behavior, BO=Behavioral outcomes, SD=Standard Deviation. The higher score, the less acceptable attitudes toward behavioral outcomes.
Comparing mean scores by Culture. Two-way ANOVA (nationality by gender) did not indicate a significant interaction effect across all behavioral variables of interest. Nevertheless, except for the self-serving purpose variable, the main effect for nationality was found to be significant across behavioral variables, including social cooperation, \( F(1,624)=35.92, p<.001, \eta^2 = .051 \), cheating, \( F(1,624)=79.41, p < .001, \eta^2 = .115 \), stealing, \( F(1,624)=41.20, p < .001, \eta^2 = .064 \), aggressive behavior, \( F(1,624)=22.78, p < .001, \eta^2 = .032 \), overall moral behavioral tendencies, \( F(1,624)=3.93, p = .048, \eta^2 = .007 \), and social desirability, \( F(1,624)=5.97, p = .015, \eta^2 = .009 \). The main effect for nationality was also found to be significant across the attitudes toward behavior measures, including attitude toward social cooperation, \( F(1,624)=11.00, p=.001, \eta^2=.017 \), attitude toward cheating, \( F(1,624)=329.54, p < .001, \eta^2 = .346 \), attitude toward stealing, \( F(1,624)=139.83, p < .001, \eta^2 = .183 \), attitude toward self-serving purpose, \( F(1,624)=5.70, p = .017, \eta^2 = .009 \), attitude toward aggressive behavior, \( F(1,624)=22.99, p < .001, \eta^2 = .036 \), and overall attitudes toward behavioral outcomes, \( F(1,624)=102.36, p = .048, \eta^2 = .141 \). The main effect for gender was only found to be significant on social cooperation, \( F(1,624)=18.79, p < .001, \eta^2 = .031 \), stealing, \( F(1,624)=35.71, p < .001, \eta^2 = .056 \), aggressive behavior, \( F(1,624)=21.77, p < .001, \eta^2 = .035 \), and overall moral behavioral tendencies, \( F(1,624)=21.42, p < .001, \eta^2 = .035 \). Significant main effects for gender were found on variables of attitude toward stealing, \( F(1,624)=10.13, p = .002, \eta^2 = .016 \), attitude toward aggressive behavior, \( F(1,624)=18.59, p < .001, \eta^2 = .029 \), and overall attitudes toward behavioral outcomes, \( F(1,624)=7.43, p = .007, \eta^2 = .012 \).

Taken together, the Chinese students reported engaging in a more social cooperative activity and a less aggressive behavior than their American peers. Meanwhile, the American students obtained higher scores on cheating, stealing,
self-serving activity and overall behavioral tendencies. In addition, the American students expressed less acceptable attitudes toward unethical actions and reported lower social desirability than the Chinese students. Compared to males, females in both countries reported higher scores of ethical behavioral activities in social cooperation, stealing, aggressive behavior and overall behavioral outcomes. Females also held less tolerable attitudes toward inadequate behavioral outcomes on stealing and aggressive behavior than male peers.

Correlations between variables by cultural context. Correlations were calculated for the set of behavioral variables within the two cultures (Table 19). The results indicated that, for the Chinese cohort, correlations ranged from low to moderate, and most correlations among attitudes toward behavioral outcomes were moderate, which were found to be significant at the .01 level. However, correlations between moral behavioral tendencies and attitudes toward behavioral outcomes were low, and self-serving behavioral tendency had weak correlations with attitudes toward social cooperation and attitude toward aggressive behavior. For the American cohort and consistent with the Chinese cohort, correlations ranged from low to moderate. When comparing the relationships between scales by group using the Z test of independent correlations, the results indicated significantly different correlations, which were summarized in Table 20. It appeared that with the exception of the relationships between attitudes toward social cooperation and attitude toward self-serving activity, attitude toward social cooperation and attitude toward aggressive behavior, attitude toward cheating and attitude toward self-serving activity, and attitude toward self-serving activity and attitude toward aggressive behavior, the relationships that the Chinese sample defined were significantly weaker than those computed within the
American sample. In addition, another difference between the Chinese and the American cohorts was that correlations between moral behavioral tendencies and attitudes toward behavioral outcomes were stronger than those in the Chinese students. Subsequent analyses would provide further understanding of the cross-cultural difference on behavioral tendencies and attitudes toward ethical behavioral conducts.
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<th>Ab</th>
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Note:
1. sc=social cooperation; ct=cheating; st= stealing; ss=self-serving orientation; ab=aggressive behavior; a_sc=attitude toward social cooperation; a_ct= attitude toward cheating; a_st= attitude toward stealing; a_ss=attitude toward self-serving orientation; a_ab= attitude toward aggressive behavior.
2. *: $p < .05$; **: $p < .01$
3. American sample (N=250) is presented above the diagonal. Chinese sample (N=380) is presented below.
### Table 20

**Z Test for the Independent Correlations for the Chinese and the American Cohorts**

<table>
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<tr>
<th>Variables</th>
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<th>St</th>
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<th>Ab</th>
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**Note:**

1. sc=social cooperation; ct=cheating; st= stealing; ss=self-serving orientation; ab=aggressive behavior; a_sc=attitude toward social cooperation; a_ct= attitude toward cheating; a_st= attitude toward stealing; a_ss=attitude toward self-serving orientation; a_ab= attitude toward aggressive behavior.
2. *: p < .05; **: p < .01, indicating significant difference of correlations between the Chinese and the American samples.
3. Positive Z score (p <.05) indicates the correlation for the Chinese sample is significantly stronger than that of the American sample, whereas negative Z score indicates that correlation for the Chinese sample is significantly lower than that of the American sample.
Confirmatory factor analyses of the behavioral intentions scale by cultural context. Confirmatory factor analysis was conducted for the Chinese cohort and the American cohort. Original confirmatory factor models (Model 7 for the Chinese sample and Model 9 for the American sample) and modified confirmatory factor models (Model 8 for the Chinese sample and Model 10 for the American sample) were displayed. Comparison of model-fit indices between the original confirmatory factor model and the modified model were summarized for the Chinese sample and the American sample in Table 21. Using the cut-off criteria of GFI > .95, RMSEA < .05, and criteria of Standardized RMR < .05, both the modified models of two samples obviously achieved better model fitting than their initial confirmatory factor Model (Model 7 for Chinese and Model 9 for American), respectively. For instance, GFI was found to be .98, with RMSEA = .04, and Standardized RMR = .03 for the Chinese sample (Model 8), and GFI was .97, with RMSEA = .03, and Standardized RMR = .04 for the American sample (Model 10), with needed model modifications. Also, Chi-square in the modified models decreased sharply from the original model, Chi-square $\chi^2$ (22, $N=380$) = 36.61, $p = .03$ for the Chinese cohort, and Chi-square $\chi^2$ (28, $N=380$) = 33.45, $p = .22$ for the American cohort. As mentioned earlier, although Chi-square was significant ($p < .05$) in the modified model for the Chinese sample, it was still reasonable to regard it as an acceptable one. At this point, both the modified models for the behavioral tendencies and the attitudes were the final best fitting confirmatory factor models for both the Chinese and the American samples, respectively.
Chi-Square=409.69, df=34, P-value=0.000, RMSEA=0.171

Figure 9
Model 7 Original Confirmatory Factor Model of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Sample

Chi-Square=36.61, df=22, P-value=0.02606, RMSEA=0.042

Figure 10
Model 8 Modified Confirmatory Factor Model of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Sample
Chi-Square=272.69, df=34, P-value=0.000, RMSEA=0.168

Figure 11
Model 9 Original Confirmatory Factor Model of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the American Sample

Chi-Square=33.45, df=28, P-value=0.21957, RMSEA=0.028

Figure 12
Model 10 Modified Confirmatory Factor Model of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the American Sample
Table 21
**Selected Goodness-of-Fit Indices of Confirmatory Analysis Factor Models for Students’ Reports on Behavior Variables by Nationality**

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$p$ value</th>
<th>GFI</th>
<th>RMSEA</th>
<th>Standardized RMR</th>
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<tr>
<td><strong>Chinese (N=380)</strong></td>
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<tr>
<td>Original model (Model 7)</td>
<td>409.69</td>
<td>34</td>
<td>&lt;.001</td>
<td>.82</td>
<td>.17</td>
<td>.07</td>
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<tr>
<td>Modified model (Model 8)</td>
<td>36.61</td>
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<td>.98</td>
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<td>.03</td>
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<td><strong>American (N=250)</strong></td>
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<tr>
<td>Original model (Model 9)</td>
<td>272.69</td>
<td>34</td>
<td>&lt;.001</td>
<td>.82</td>
<td>.17</td>
<td>.07</td>
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<tr>
<td>Modified model (Model 10)</td>
<td>33.45</td>
<td>28</td>
<td>.22</td>
<td>.97</td>
<td>.03</td>
<td>.04</td>
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</tbody>
</table>

Note: $p$-value was significant (<.05) for Chi-square in modified model for Chinese sample. However, theoretically, Chi-square is subjected to change and turned to be significant if a sample size is greater than 100.

As shown in the CFA Models (Model 8 & Model 10) and Table 22, factor loadings illustrated medium to high loadings to latent variables of moral behavioral tendencies and attitudes toward moral outcomes for both the Chinese and the American students. All factor loadings were found to be significant at the .05 level.

For the self-reported moral behavioral tendency module, there were error covariances of the observed variables between social cooperation and aggressive behavior, between cheating and self-serving orientation, and between stealing and self-serving orientation for the Chinese students. For attitudes toward behavioral outcomes, there were correlations between attitude toward social cooperation and attitude toward aggressive behavior, and attitude toward cheating and attitude toward aggressive behavior. Correlations were also found between social cooperation and attitude toward social cooperation, cheating and attitude toward cheating, self-report stealing and attitude toward stealing, self-serving behavior and attitude toward self-serving behavior, and aggressive behavior and attitude toward aggressive behavior.

For the American cohort, a correlation was only found between stealing and aggressive behavior in moral behavioral tendencies. Consistent with the Chinese model, correlations were also found between self-reported social cooperation and
attitude toward social cooperation, cheating and attitude toward cheating, stealing and attitude toward stealing, self-serving behavior and attitude toward self-serving behavior, and aggressive behavior and attitude toward aggressive behavior. According to the visual models and the summary table of factor loadings, the confirmatory factor model of behavioral outcomes for the Chinese cohort appeared to be different from that for the American cohort. It seemed that the Chinese students were less sensitive to behavior categories and did not distinguish these behaviors as clearly as did the American students.

Visually, the confirmatory factor model of moral outcomes (behavioral tendencies and attitudes toward behavioral outcomes) for the Chinese cohort (Model 8) appeared somewhat different from those of the American cohort (Model 10) in error variance correlations. Model comparison showed that global Chi-square $\chi^2$ was found to be 192.89, with degree of freedom=61, $p<.001$ (Table 23). Compared to the Chi-square for the model with invariant factor loading and error covariance, the difference in Chi-square ($\Delta \chi^2=130.56$, $\Delta df=16$) was found to be significant at the .05 level. Thus, both factor loadings and error variances varied across cultural samples, indicating the Chinese sample reported behaviors and held an attitude toward behavioral misconducts in a different way from the American sample.
Table 22
Standardized Estimates for Factor Confirmatory Model of Moral Outcomes for the Chinese and the American Students

<table>
<thead>
<tr>
<th></th>
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<th>American (N = 250)</th>
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<td></td>
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<td>Modified model</td>
<td>Original model</td>
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Note:
1. A_Social cooperation=Attitude toward social cooperation, A_Cheating= Attitude toward cheating, A_Stealing=Attitude toward stealing, A_Self-serving= Attitude toward self-serving purpose, A_Aggressive behavior= Attitude toward aggressive behavior.
2. All factor loadings were significant at the .05 level.
Table 23
Model Comparison of Confirmatory Factor Model of Behavioral Tendencies and Attitudes toward Behavioral Outcomes between the Chinese Cohort (N=380) and the American Cohort (N=250)

<table>
<thead>
<tr>
<th>Observed variable</th>
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<th>American (Model 10)</th>
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</table>

\[ \chi^2 = 36.61 \]
Degree of freedom \( df = 22 \)
\( p \) value \( .026 \)

\[ \chi^2 = 33.45 \]
Degree of freedom \( df = 28 \)
\( p \) value \( .22 \)

\[ \chi^2 = 192.89 \]
Degree of freedom \( df = 61 \)
\( p \) value \( <.001 \)

Note: 1. Degrees of freedom for Chinese model and American model differ because of different error covariance correlations.
2. For model with equal factor loading and equal error variance correlation: \( \chi^2 = 323.45, df = 77, p < .001 \).
3. \( \Delta \chi^2 = 130.56, \Delta df = 16, \) at the .05 level of significance (\( \chi^2 = 26.296, df = 16 \)).
4. All factor loadings were significant at the .05 level.

Section Two: Regional Differences

In this section, evidence is provided to address the question of whether there are regional differences on measures of Confucian self-development within contemporary Chinese subgroups. More specifically, this section answered, to what extent, Chinese people in the rural areas have higher scores on measures of the Confucian self in comparison to more westernized urban Chinese college students. Additionally similar comparisons were made using the moral judgment development measure.
Question 4: Is there a difference in understanding of *ren* between urban and rural Chinese college students?

**Confucian self.** As classified in Chapter Three, students from the rural areas and towns were categorized into a rural-town group. A contrasting group was formed by combining students from the suburban areas and the city as an urban group. First, it was important to test reliability of each observed variable for the Confucian self-scale before conducting a confirmatory factor analysis for the Confucian self within Chinese subgroups. As described in Table 24, the observed reliability of the Confucian self-scale was found to be medium to high, which provided satisfactory support for later statistical analyses. It is worth noting that one item (item 311) associating with the mind subscale deleted for both the rural-town and urban cohorts, in order to gain a higher reliability for the mind subscale.

---

11 Item 3 of mind: I don’t think it’s important for one to develop these characteristics.
Mean comparison by Chinese subgroups. Similar to the cross-cultural comparison of the Confucian self between the Chinese and the American cohorts, descriptive analyses of the Confucian self were calculated for the Chinese rural-town and the urban cohorts (Table 25). Except on the variable of country, the rural-town students generally reported higher score on each variable of the Confucian self than their urban peers. For the rural-town cohort, females had higher scores of the Confucian self and total score than their male peers on all items with the exception of the world and spirit variables. For the urban cohort, with the exception of variables of the family, country, mind and total score of the Confucian self, females reported lower scores than their male counterparts on the variables of the community, world, body, soul, and spirit. With regard to area difference by gender, the rural-town females reported higher scores across all variables of the Confucian self than the urban
females. The rural-town males reported higher scores on the family, community, world, mind, soul, and total score of Confucian self while lower scores of the country, body, and spirit than their urban male peers on the Confucian self-measure.

Two-way ANOVA (gender by Chinese location) indicated there was no significant interaction effect across all observed variables of the Confucian self. The main effect for gender was found to be a significant tendency on the variable of the family, $F(1, 359)=3.23, p = .073, \eta^2 = .009$, indicating that Chinese females were more likely than males to expand the self to the family within Confucian ethics. Both Chinese females and males were on the same page when it came to expanding the self to a boarder scope of the community, country and world, and comprehending self in terms of the body, mind, soul, and spirit. It was not surprising that there was no gender difference of sense of Confucian self.
### Table 25

*Mean and Standard Deviation for the Confucian Self and Its Sub-Scales by Gender and Chinese Area*

<table>
<thead>
<tr>
<th>Area</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT</td>
<td>166</td>
<td>46.73</td>
<td>5.37</td>
<td>45.10</td>
<td>5.57</td>
<td>43.69</td>
<td>5.96</td>
<td>34.37</td>
<td>5.30</td>
<td>44.80</td>
<td>8.02</td>
<td>45.62</td>
<td>5.23</td>
<td>37.35</td>
<td>5.56</td>
<td>11.16</td>
<td>2.27</td>
</tr>
<tr>
<td>M</td>
<td>86</td>
<td>46.03</td>
<td>6.02</td>
<td>44.81</td>
<td>6.28</td>
<td>43.13</td>
<td>6.12</td>
<td>34.41</td>
<td>5.89</td>
<td>44.79</td>
<td>8.51</td>
<td>45.10</td>
<td>5.43</td>
<td>36.88</td>
<td>6.09</td>
<td>11.84</td>
<td>2.51</td>
</tr>
<tr>
<td>T</td>
<td>252</td>
<td>46.50</td>
<td>5.59</td>
<td>45.00</td>
<td>5.83</td>
<td>43.50</td>
<td>6.00</td>
<td>34.38</td>
<td>5.50</td>
<td>44.80</td>
<td>8.17</td>
<td>45.44</td>
<td>5.29</td>
<td>37.19</td>
<td>5.74</td>
<td>11.39</td>
<td>2.37</td>
</tr>
</tbody>
</table>

UB   | 75 | 46.59| 6.04| 44.07| 5.55| 43.67| 6.08| 33.69| 6.17| 44.27| 8.27| 44.77| 5.58| 35.64| 7.00| 10.83| 1.98| 321.37| 41.09|

M    | 36 | 44.75| 6.89| 44.75| 5.18| 43.25| 7.22| 33.78| 5.40| 45.69| 9.00| 44.67| 6.51| 36.86| 7.58| 12.47| 3.39| 321.00| 40.58|

T    | 111| 45.99| 6.36| 44.29| 5.42| 43.53| 6.44| 33.72| 5.91| 44.73| 8.50| 44.79| 6.41| 36.04| 7.18| 11.36| 2.62| 321.25| 49.74|

Note: RT=Rural-town; UB=Urban; F=Female; M=Male; T=Total. Fam=Family; Com=Community; Cntry=Country; Wld=World. M=Mean, and SD=Standard Deviation.

### Table 26

*Correlations among Indicators of the Confucian Self of the Chinese Rural-Town and the Chinese Urban Cohorts*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Family</th>
<th>Community</th>
<th>Country</th>
<th>World</th>
<th>Body</th>
<th>Mind</th>
<th>Soul</th>
<th>Spirit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>—</td>
<td>.60**</td>
<td>.55**</td>
<td>.35**</td>
<td>.39**</td>
<td>.45**</td>
<td>.33**</td>
<td>.33**</td>
</tr>
<tr>
<td>Community</td>
<td>.67**</td>
<td>—</td>
<td>.76**</td>
<td>.62**</td>
<td>.63**</td>
<td>.55**</td>
<td>.58**</td>
<td>.54**</td>
</tr>
<tr>
<td>Country</td>
<td>.66**</td>
<td>.77**</td>
<td>—</td>
<td>.68**</td>
<td>.72**</td>
<td>.57**</td>
<td>.53**</td>
<td>.59**</td>
</tr>
<tr>
<td>World</td>
<td>.50**</td>
<td>.65**</td>
<td>.69**</td>
<td>—</td>
<td>.69**</td>
<td>.52**</td>
<td>.57**</td>
<td>.74**</td>
</tr>
<tr>
<td>Body</td>
<td>.50**</td>
<td>.62**</td>
<td>.65**</td>
<td>.63**</td>
<td>—</td>
<td>.45**</td>
<td>.53**</td>
<td>.61**</td>
</tr>
<tr>
<td>Mind</td>
<td>.56**</td>
<td>.62**</td>
<td>.60**</td>
<td>.47**</td>
<td>.41*</td>
<td>—</td>
<td>.40**</td>
<td>.35**</td>
</tr>
<tr>
<td>Soul</td>
<td>.37**</td>
<td>.54**</td>
<td>.57**</td>
<td>.55**</td>
<td>.61**</td>
<td>.40**</td>
<td>—</td>
<td>.66**</td>
</tr>
<tr>
<td>Spirit</td>
<td>.34**</td>
<td>.49**</td>
<td>.56**</td>
<td>.55**</td>
<td>.53**</td>
<td>.36**</td>
<td>.50**</td>
<td>—</td>
</tr>
</tbody>
</table>

Note:
1. **: p < .01
2. Rural-town sample (N=252) is presented below the diagonal. Urban sample (N=111) is presented above the diagonal.
Correlations between the Confucian sub-scales by cultural niche. Correlations were calculated to better understand relationships among observed variables of the Confucian self for the rural-town and urban cohorts. As summarized in Table 26, the rural-town and the urban cohorts appeared to have a similar pattern of correlation, except for correlation between the family and world, family and body, and world and spirit. However, no significant results confirmed significant differences in correlations between the rural-town and the urban cohorts, suggesting that the rural-town and the urban cohorts identified the relationships among observed variables of the Confucian self at the same degree.

Confirmatory analysis of the Confucian scale by Chinese subgroup. Since only one latent variable was found to describe the measure of the Confucian self, a confirmatory factor model\textsuperscript{12} of the Confucian self with a single latent variable was generated for the Chinese rural-town and the urban cohorts, respectively. As illustrated in Figure 13, for the Chinese rural-town cohort, Chi-square was found to be $\chi^2 (20, N=252) = 98.12, p < .001$, with RMSEA = .125, and GFI = .91. For the urban cohort, Chi-square was found to be $\chi^2 (20, N=111) = 73.88, p < .001$, with RMSEA $\textit{w} = .157$, and GFI = .86 (Figure 14). Selected model-fit indices of results separately revealed poor fitting confirmatory factor models for the rural-town and urban cohorts, respectively. Consequently, there was a need to correlate error variances between the observed variables in order to achieve a better model for each cohort.

\textsuperscript{12} Given the poor fit I wondered whether the originally proposed the two-factor model was a better representation for the rural data. However, the results showed it did not fit any better.
Suggested model modifications were provided and these parameters may be important but were not well accounted for the original models of the Confucian self for the Chinese subgroups. By adding error covariance correlations among the
observed variables, revised confirmatory factor models were reproduced and depicted in Model 13 (Figure 15) and Model 14 (Figure 16) for the rural-town and the urban cohorts, respectively. Selected goodness-of-fit indices (Table 27) and standardized estimates (Table 28) were presented for the final modified model of the Confucian self for the two cohorts, separately. For the rural-town cohort, family was found to correlate with community, mind, soul, and spirit; community correlated with mind, and body correlated with soul. For the urban cohort, family correlated with community and world, world correlated with spirit, and soul correlated with spirit. All factor loadings and all of the parameters included in the modified models of the Confucian self for both the rural-town and the urban cohorts were found to be statistically significant at the .05 level. Model-fit indices of the initial confirmatory factor models and the modified confirmatory factor models were summarized in Table 28 for the rural-town and the urban cohorts, respectively. Results presented that Chi-square for the modified model was found to be $\chi^2 (13, N=252) = 26.01, p = .016$ for the Chinese rural-town cohort, and Chi-square was found to be $\chi^2 (16, N=111) = 22.67, p = .12$ for the urban sample. Compared to the original confirmatory factor models, Chi-square $\chi^2$ for the revised models decreased and was statistically nonsignificant. In addition, GFI was found to be .97, with RMSEA = .063, and Standardized RMR = .028 for the rural-town sample (Model 15), and GFI was .95, with RMSEA = .06, and Standardized RMR = .036 for the urban sample (Model 16), without additional modifications needed for the both cohorts. Thus, although not all model-fit indices were in the optimal range, it was still reasonable to conclude that the modified model of the Confucian self for the rural-town cohort (Model 13) and the urban cohort (Model 14) were acceptable ones, and they were the final best fitting CFA models with Chinese data set in this study. Factor loading of each observed
variable to the Confucian self was stated in Table 28 and all loadings were significant at the .05 level.

Figure 15
*Model 13 Modified Confirmatory Factor Model of the Confucian Self with a Single Latent Variable for the Chinese Rural-Town Group*

Chi-Square=26.01, df=13, P-value=0.01695, RMSEA=0.063

Figure 16
*Model 14 Modified Confirmatory Factor Model of the Confucian Self with a Single Latent Variable for the Chinese Urban Group*

Chi-Square=22.67, df=16, P-value=0.12286, RMSEA=0.062
Table 27
Selected Goodness-of-Fit Indices of Confirmatory Analysis Factor Models of the Confucian Self by Chinese Regions

<table>
<thead>
<tr>
<th>Model</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>p value</th>
<th>GFI</th>
<th>RMSEA</th>
<th>Standardized RMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese Rural-Town (N=252)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original model</td>
<td>98.22</td>
<td>20</td>
<td>&lt;.001</td>
<td>.91</td>
<td>.125</td>
<td>.051</td>
</tr>
<tr>
<td>Modified model</td>
<td>26.01</td>
<td>13</td>
<td>.016</td>
<td>.97</td>
<td>.063</td>
<td>.028</td>
</tr>
<tr>
<td>Chinese Urban (N=111)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original model</td>
<td>73.88</td>
<td>20</td>
<td>&lt;.001</td>
<td>.86</td>
<td>.157</td>
<td>.061</td>
</tr>
<tr>
<td>Modified model</td>
<td>22.67</td>
<td>16</td>
<td>.12</td>
<td>.95</td>
<td>.06</td>
<td>.036</td>
</tr>
</tbody>
</table>

Note.
1. ***p < .001;

Table 28
Standardized Estimates for Single Factor Confirmatory Model of the Confucian Self for the Chinese Rural-Town Students (N = 252) and the Urban Students (N = 111)

<table>
<thead>
<tr>
<th>Factor loadings:</th>
<th>Original Model</th>
<th>Modified Model</th>
<th>Original Model</th>
<th>Modified Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>.71</td>
<td>.70</td>
<td>.57</td>
<td>.58</td>
</tr>
<tr>
<td>Community</td>
<td>.86</td>
<td>.84</td>
<td>.82</td>
<td>.83</td>
</tr>
<tr>
<td>Country</td>
<td>.89</td>
<td>.89</td>
<td>.87</td>
<td>.89</td>
</tr>
<tr>
<td>World</td>
<td>.77</td>
<td>.78</td>
<td>.82</td>
<td>.80</td>
</tr>
<tr>
<td>Body</td>
<td>.75</td>
<td>.76</td>
<td>.80</td>
<td>.80</td>
</tr>
<tr>
<td>Mind</td>
<td>.66</td>
<td>.63</td>
<td>.62</td>
<td>.64</td>
</tr>
<tr>
<td>Soul</td>
<td>.66</td>
<td>.65</td>
<td>.69</td>
<td>.65</td>
</tr>
<tr>
<td>Spirit</td>
<td>.62</td>
<td>.64</td>
<td>.74</td>
<td>.68</td>
</tr>
</tbody>
</table>

Measurement error variances:

<table>
<thead>
<tr>
<th>Factor loadings:</th>
<th>Original Model</th>
<th>Modified Model</th>
<th>Original Model</th>
<th>Modified Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>.49</td>
<td>.51</td>
<td>.68</td>
<td>.66</td>
</tr>
<tr>
<td>Community</td>
<td>.26</td>
<td>.30</td>
<td>.32</td>
<td>.31</td>
</tr>
<tr>
<td>Country</td>
<td>.21</td>
<td>.20</td>
<td>.25</td>
<td>.21</td>
</tr>
<tr>
<td>World</td>
<td>.40</td>
<td>.39</td>
<td>.33</td>
<td>.37</td>
</tr>
<tr>
<td>Body</td>
<td>.44</td>
<td>.43</td>
<td>.36</td>
<td>.37</td>
</tr>
<tr>
<td>Mind</td>
<td>.56</td>
<td>.60</td>
<td>.62</td>
<td>.59</td>
</tr>
<tr>
<td>Soul</td>
<td>.56</td>
<td>.56</td>
<td>.53</td>
<td>.57</td>
</tr>
<tr>
<td>Spirit</td>
<td>.61</td>
<td>.59</td>
<td>.45</td>
<td>.54</td>
</tr>
</tbody>
</table>

Note: All factor loadings were significant at the .05 level of significance.

Visually, the confirmatory factor model of the Confucian self for the rural-town cohort (Model 13) may be somewhat different from that of the urban cohort (Model 14) in error variance correlations. Model comparisons showed that global Chi-square
\( \Delta \chi^2 \) was found to be 131.14, with degree of freedom=49, \( p<.001 \) (Table 28).

Compared to Chi-square for the model with equal factor loadings and error covariances, decrease in Chi-square (\( \Delta \chi^2=51.94, \Delta df=12 \)) was found to be significant at the .05 level. Thus, both factor loadings and error variances differentiate between the two samples, indicating that the rural-town cohort had a different sense of the Confucian self from the urban cohort.

Table 29

<table>
<thead>
<tr>
<th>Observed variable</th>
<th>Rural-town (Model 15)</th>
<th>Urban (Model 16)</th>
<th>Unequal factor loadings and unequal error variances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>.70</td>
<td>.58</td>
<td>—</td>
</tr>
<tr>
<td>Community</td>
<td>.84</td>
<td>.83</td>
<td>—</td>
</tr>
<tr>
<td>Country</td>
<td>.89</td>
<td>.89</td>
<td>—</td>
</tr>
<tr>
<td>World</td>
<td>.78</td>
<td>.80</td>
<td>—</td>
</tr>
<tr>
<td>Body</td>
<td>.76</td>
<td>.80</td>
<td>—</td>
</tr>
<tr>
<td>Mind</td>
<td>.63</td>
<td>.64</td>
<td>—</td>
</tr>
<tr>
<td>Soul</td>
<td>.65</td>
<td>.65</td>
<td>—</td>
</tr>
<tr>
<td>Spirit</td>
<td>.64</td>
<td>.68</td>
<td>—</td>
</tr>
<tr>
<td>( \chi^2 )</td>
<td>26.01</td>
<td>22.67</td>
<td>79.20</td>
</tr>
<tr>
<td>Degree of freedom</td>
<td>13</td>
<td>16</td>
<td>37</td>
</tr>
<tr>
<td>( p ) value</td>
<td>.016</td>
<td>.12</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note: 1. Degrees of freedom for Chinese rural-town model and Chinese urban model differ because of different error covariance correlations.
2. For model with equal factor loading and equal error variance correlation: \( \chi^2=131.14, df=49, p<.001 \).
3. \( \Delta \chi^2=51.94, \Delta df=12 \), at the .05 level of significance (\( \chi^2=21.026, df=12 \)).
4. All factor loadings were significant at the .05 level.

Question 5: Is there a difference between the urban and rural Chinese college students on moral judgment development?

Moral judgment.

Mean differences on moral judgment development by Urban and Rural Chinese
samples. Descriptive analyses were conducted to understand DIT scores of the rural-town and the urban cohorts. In general, as displayed in Table 30, the rural-town cohort received higher Maintaining Norms scores but lower P scores and N2 scores than the urban cohort. There was no obvious difference in receiving Personal Interest scores between the two cohorts. More specifically, the rural-town females had lower Personal Interest scores, P scores, and N2 scores than their female urban counterparts, whereas the rural-town males had higher Personal Interest and Maintaining Norms scores and lower P scores and N2 scores than the urban cohort. Two-way ANOVA (gender by location) analysis did not find a significant interaction effect on DIT scores. The main effects for location were noted on the Maintaining Norms scores, $F(1,359)=7.87, p=.005, \eta^2 = .021$, P scores, $F(1,359)=10.65, p =.001, \eta^2 = .029$ and N2 scores, $F(1,359)=4.74, p =.03, \eta^2 = .013$. No significant main effect for gender was found across DIT scores. Thus, it appeared that the Chinese rural-town students preferred a Maintaining Norm schema whereas the Chinese-urban students preferred a Postconventional thinking schema on the DIT.

Table 30

Mean and Standard Deviation for DIT Score (moral judgment) by Gender and Area in China

<table>
<thead>
<tr>
<th>Area</th>
<th>PI M SD</th>
<th>MN M SD</th>
<th>P score M SD</th>
<th>N2 score M SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural-town</td>
<td>F 166</td>
<td>31.38</td>
<td>15.13</td>
<td>28.51</td>
</tr>
<tr>
<td></td>
<td>M 86</td>
<td>29.93</td>
<td>16.36</td>
<td>32.26</td>
</tr>
<tr>
<td></td>
<td>T 252</td>
<td>30.89</td>
<td>15.54</td>
<td>29.79</td>
</tr>
<tr>
<td>Urban</td>
<td>F 75</td>
<td>32.06</td>
<td>15.21</td>
<td>25.21</td>
</tr>
<tr>
<td></td>
<td>M 36</td>
<td>28.43</td>
<td>16.53</td>
<td>26.57</td>
</tr>
<tr>
<td></td>
<td>T 111</td>
<td>30.88</td>
<td>15.67</td>
<td>25.66</td>
</tr>
</tbody>
</table>

Note: PI = Personal Interest, MN=Maintaining Norms, P score= Postconventional score.
Moral behavioral measure.

Mean differences on the behavioral measure by rural and urban subgroups.

Descriptive analyses of moral behavioral tendencies and attitudes toward behavioral outcomes were presented by Chinese regions and gender (Table 31 & Table 32). Regarding the behavioral tendency variables, except for the social cooperation index, the rural-town cohort reported higher scores than the urban cohort on cheating, stealing, self-serving activity, aggressive behavior, and total score of behavioral tendencies. Additionally, the rural-town females reported high scores than the urban females on cheating, stealing, self-serving activity, aggressive behavior, and total score of behavioral tendencies, but had lower score of social cooperation than their urban peers. Similarly, the rural-town males received higher scores than the urban males on social cooperation, stealing, self-serving activity, aggressive behavior, and total score of behavioral tendencies, but they had a lower score of cheating than the urban males. With regard to gender difference on the behavioral tendency measurement, the rural-town females reported higher scores than their male counterparts across all variables of behavioral tendencies. The urban females reported higher scores than their male peers on social cooperation, stealing, aggressive behavior and total scores of behavioral tendencies, yet they had lower scores on cheating and self-serving activity than urban males. No significant interaction effect between location and gender was found by Two-way ANOVA. A significant main effect for gender was found on social cooperation, $F(1, 359)=15.94$, $p <.001$, $\eta^2 = .043$, stealing, $F(1, 359)=20.18$, $p <.001$, $\eta^2 = .053$, aggressive behavior, $F(1, 359)=12.48$, $p <.001$, $\eta^2 = .034$, and general behavioral tendencies, $F(1, 359)=12.69$, $p <.001$, $\eta^2 = .034$. No significant main effect for region was found across of observed variables of behavioral tendencies.
For regional difference on attitudes toward behavioral outcomes, the results indicated that the rural-town cohort generally reported higher scores of all observed variables of attitudes toward behavioral outcomes than their urban counterparts. In a specific way, the rural-town females reported higher scores of all observed variables of attitudes toward behavioral outcomes than the urban females, and the rural-town males reported higher scores of all variables of attitudes toward behavioral outcomes (except self-serving activity) than the urban males.

For gender difference, the rural-town females reported higher scores of all observed variables of attitudes toward behavioral outcomes than the rural-town males, and the urban females reported higher scores than male students on attitudes toward social cooperation, stealing, aggressive behavior and total score of attitudes toward behavioral outcomes. Yet they had lower scores of attitudes toward cheating and self-serving activity than their male peers. Two-way ANOVA (gender by location) revealed that no significant interaction effect across all observed variables of attitudes toward behavioral outcomes. The main effect for location was found to be significant on total score of attitudes toward behavioral outcomes, $F(1, 359)=4.29, p = .039, \eta^2 = .012$. The main effect for gender was found to be significant on attitudes toward aggressive behavior, $F(1, 359)=8.87, p = .003, \eta^2 = .024$. Further analyses would aid in better understanding of relations between behavioral tendencies and attitudes toward behavioral outcomes in subsequent reports.
### Table 31
Mean and Standard Deviation of Moral Behavioral Tendencies and Social Desirability by Chinese Area and Gender

<table>
<thead>
<tr>
<th>Area</th>
<th>G</th>
<th>N</th>
<th>SC</th>
<th>CT</th>
<th>ST</th>
<th>SS</th>
<th>AB</th>
<th>MB</th>
<th>SD1</th>
<th>M1</th>
<th>SD</th>
<th>M1</th>
<th>SD</th>
<th>M1</th>
<th>SD</th>
<th>M1</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural-Town</td>
<td>F</td>
<td>166</td>
<td>36.84</td>
<td>2.27</td>
<td>21.46</td>
<td>2.23</td>
<td>22.08</td>
<td>2.07</td>
<td>11.57</td>
<td>1.52</td>
<td>19.49</td>
<td>.85</td>
<td>111.44</td>
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<td>8.12</td>
<td>2.88</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>86</td>
<td>36.16</td>
<td>2.51</td>
<td>20.91</td>
<td>2.65</td>
<td>21.14</td>
<td>2.40</td>
<td>11.47</td>
<td>1.69</td>
<td>19.01</td>
<td>1.37</td>
<td>108.69</td>
<td>8.27</td>
<td>8.51</td>
<td>2.67</td>
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</tr>
<tr>
<td></td>
<td>T</td>
<td>252</td>
<td>36.61</td>
<td>2.37</td>
<td>21.27</td>
<td>2.39</td>
<td>21.76</td>
<td>2.23</td>
<td>11.54</td>
<td>1.58</td>
<td>19.33</td>
<td>1.08</td>
<td>110.50</td>
<td>7.06</td>
<td>8.25</td>
<td>2.81</td>
<td></td>
</tr>
<tr>
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<td>37.17</td>
<td>1.98</td>
<td>20.80</td>
<td>2.55</td>
<td>21.83</td>
<td>1.74</td>
<td>11.28</td>
<td>1.45</td>
<td>19.32</td>
<td>.92</td>
<td>110.40</td>
<td>5.68</td>
<td>7.87</td>
<td>2.60</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>36</td>
<td>35.53</td>
<td>3.39</td>
<td>20.94</td>
<td>2.89</td>
<td>20.39</td>
<td>2.89</td>
<td>11.42</td>
<td>1.57</td>
<td>18.81</td>
<td>2.00</td>
<td>107.08</td>
<td>9.58</td>
<td>7.83</td>
<td>3.08</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>111</td>
<td>36.64</td>
<td>2.62</td>
<td>21.14</td>
<td>2.65</td>
<td>21.36</td>
<td>2.27</td>
<td>11.32</td>
<td>1.48</td>
<td>19.27</td>
<td>1.38</td>
<td>109.32</td>
<td>7.35</td>
<td>7.86</td>
<td>2.75</td>
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</tr>
</tbody>
</table>

Note: G=Gender, F=Female, M=Male, T=Total, N=Number, SC=Social cooperation, CT=Cheating, ST=Stealing, AB=Aggressive behavior, MB=Moral behavioral tendencies, SD1=Social desirability, M1=Mean, SD=Standard Deviation. The higher score, the higher ethical behavioral tendencies.

### Table 32
Mean and Standard Deviation of Attitudes toward Behavioral Outcomes by Chinese Area and Gender

<table>
<thead>
<tr>
<th>Area</th>
<th>G</th>
<th>N</th>
<th>SC</th>
<th>CT</th>
<th>ST</th>
<th>SS</th>
<th>AB</th>
<th>BO</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural-Town</td>
<td>F</td>
<td>166</td>
<td>33.57</td>
<td>3.15</td>
<td>18.92</td>
<td>2.43</td>
<td>20.02</td>
<td>2.39</td>
<td>11.55</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>86</td>
<td>32.71</td>
<td>3.55</td>
<td>18.66</td>
<td>2.54</td>
<td>19.56</td>
<td>3.27</td>
<td>11.26</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>252</td>
<td>33.28</td>
<td>3.31</td>
<td>18.83</td>
<td>2.46</td>
<td>19.86</td>
<td>2.71</td>
<td>11.45</td>
</tr>
<tr>
<td>Urban</td>
<td>F</td>
<td>75</td>
<td>32.72</td>
<td>3.58</td>
<td>17.61</td>
<td>2.65</td>
<td>19.60</td>
<td>2.28</td>
<td>11.21</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>36</td>
<td>32.14</td>
<td>4.96</td>
<td>18.19</td>
<td>3.50</td>
<td>19.00</td>
<td>2.77</td>
<td>11.28</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>111</td>
<td>32.53</td>
<td>4.06</td>
<td>17.80</td>
<td>2.95</td>
<td>19.41</td>
<td>2.46</td>
<td>11.23</td>
</tr>
</tbody>
</table>

Note: G=Gender, F=Female, M=Male, T=Total, N=Number, SC=Social cooperation, CT=Cheating, ST=Stealing, AB=Aggressive behavior, BO=Behavioral Outcomes, M1=Mean, SD=Standard Deviation. The higher score, the less acceptable attitudes toward behavioral outcomes.
Correlations between behavioral subscales within rural and urban groups.

Correlations among observed variables of behavioral tendencies and attitudes toward behavioral outcomes were displayed among the Chinese students (Table 3). It was found that, for the rural-town cohort, correlations among self-reported behavioral tendencies ranged low to moderate in magnitude and most of them were statistically significant at the .05 level. The rural-town sample’s attitudes toward behavioral outcomes were also statistically significant and somewhat larger in magnitude. However, correlations between behavioral tendencies and attitudes toward behavioral conducts were low and some of them were not significantly correlated to each other (Table 3). Significant Z-test was found in correlations between stealing and attitude toward social cooperation, Z=1.97, p=.05, and between stealing and attitude toward social cooperation, Z=2.32, p=.02 for the two groups. A similar pattern of correlations was found among behavioral tendencies and attitudes toward behavioral outcomes for the urban sample. It seemed that moral behavioral tendencies were not always in paralleled with their corresponding attitudes toward behavioral outcomes, and it appeared as if one’s attitudes may not relate to his/her behavioral performance for the Chinese subjects. However, further analyses of cross-location difference revealed that the rural-town and the urban samples shared a common pattern of correlations among the observed variables of moral behavioral tendencies and attitudes toward behavioral outcomes (see the following analyses).
### Table 33

**Correlations among Indicators of Moral Outcomes for the Chinese Rural-Town and Urban Cohorts**

<table>
<thead>
<tr>
<th>Variables</th>
<th>sc</th>
<th>ct</th>
<th>st</th>
<th>ss</th>
<th>ab</th>
<th>a_sc</th>
<th>a_ct</th>
<th>a_st</th>
<th>a_ss</th>
<th>a_ab</th>
</tr>
</thead>
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<td>.38**</td>
<td>.40**</td>
<td>.22**</td>
<td>.59**</td>
<td>.22*</td>
<td>0.11</td>
<td>0.13</td>
<td>0.13</td>
<td>.23*</td>
</tr>
<tr>
<td>ct</td>
<td>.36**</td>
<td>—</td>
<td>.37**</td>
<td>.47**</td>
<td>.19*</td>
<td>0.12</td>
<td>.45**</td>
<td>0.14</td>
<td>0.18</td>
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<td>.45**</td>
<td>—</td>
<td>.37**</td>
<td>.34**</td>
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<td>0.12</td>
<td>0.30**</td>
<td>0.02</td>
<td>0.1</td>
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<td>ss</td>
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<td>.45**</td>
<td>.40**</td>
<td>—</td>
<td>0.15</td>
<td>0.03</td>
<td>.31**</td>
<td>0.16</td>
<td>0.27**</td>
<td>-0.08</td>
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<tr>
<td>ab</td>
<td>.46**</td>
<td>.35**</td>
<td>.49**</td>
<td>.27**</td>
<td>—</td>
<td>.20*</td>
<td>0.01</td>
<td>.20*</td>
<td>.20*</td>
<td>.34**</td>
</tr>
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<td>.17**</td>
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<td>.08</td>
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<td>—</td>
<td>.56**</td>
<td>.70**</td>
<td>.70**</td>
<td>.76**</td>
</tr>
<tr>
<td>a_ct</td>
<td>.20**</td>
<td>.41**</td>
<td>.26**</td>
<td>.17**</td>
<td>.14*</td>
<td>.61**</td>
<td>—</td>
<td>.61**</td>
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<td>—</td>
<td>.68**</td>
<td>.64**</td>
</tr>
<tr>
<td>a_ss</td>
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<td>.24**</td>
<td><strong>.28</strong></td>
<td>.28**</td>
<td>.17**</td>
<td>.59**</td>
<td>.63**</td>
<td>.64**</td>
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<tr>
<td>a_ab</td>
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<td>.12**</td>
<td>.25**</td>
<td>.06</td>
<td>.35**</td>
<td>.71**</td>
<td>.48**</td>
<td>.62**</td>
<td>.57**</td>
<td>—</td>
</tr>
</tbody>
</table>

**Note:**

1. sc=social cooperation; ct=cheating; st=stealing; ss=self-serving orientation; ab=aggressive behavior; a_sc=attitude toward social cooperation; a_ct=attitude toward cheating; a_st=attitude toward stealing; a_ss=attitude toward self-serving orientation; a_ab=attitude toward aggressive behavior.
2. *: p < .05; **: p < .01
3. Urban sample (N=111) is presented above the diagonal. Rural-Town sample (N=252) is presented below the diagonal.
4. Correlations highlighted with the same color indicate significant Z-value between the two cohorts, suggesting significantly different correlations between the two variables for the Chinese rural-town and the urban cohorts.
**Confirmatory factor analysis for the behavioral measures within urban and rural subgroups.** Confirmatory factor analysis was conducted to determine relationships among behavioral tendencies and attitudes toward behavioral outcomes.

Initial confirmatory factor models of moral outcomes were illustrated in Figure 17 and Figure 18. The results indicated that Chi-square was found to be $\chi^2 (34, N=252) = 236.62$, $p<.001$, with RMSEA =.154, GFI=.84, and SRMR=.065 for the Chinese rural-town cohort, and Chi-square was $\chi^2 (34, N=111) = 182.05$, $p<.001$, with RMSEA =.199, GFI=.75, and SRMR=.10 for the Chinese urban cohort. Using the cut-off criteria mentioned earlier, it was apparent that both the initial confirmatory factor models of moral outcomes were poor fitting ones and additional indices were suggested to correlate observed variables in order to achieve better goodness-fit models for rural-town cohort and urban cohort, respectively.

![Figure 17](image-url)

*Figure 17*
*Model 15 Original Confirmatory Factor Model of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Rural-Town Group*
Model revision was run as indicated. Modified confirmatory factor models were portrayed in Figure 19 for the Chinese rural-town cohort (Model 17) and Figure 20 for the Chinese urban cohort (Model 18). Comparisons on model-fit indices between the initial confirmatory factor model and the modified confirmatory factor model were separately summarized in Table 35 for these two cohorts. In the revised confirmatory factor models, Chi-square was found to be \( \chi^2 (25, N=252) = 25.16, p=.45 \), with RMSEA =.005, GFI=.98, and SRMR=.031 for the Chinese rural-town cohort, and Chi-square was \( \chi^2 (28, N=111) = 51.66, p<.01 \), with RMSEA =.088, GFI=.91, and SRMR=.073 for the Chinese urban cohort. Using the cut-off criteria mentioned earlier, it was obviously that the modified confirmatory factor model was a good fitting one for the Chinese rural-town cohort, with no extra model modification indicated.

Relationships among the observed variables of moral outcomes and behavioral tendencies and attitudes toward behavioral outcomes were well expressed in the
model 17 for the Chinese rural-town cohort. For the Chinese urban group, although the modified confirmatory factor model appeared to be poor fitting, model-fit indices of the modified confirmatory factor model were much improved when compared to those goodness-of-fit indices of the initial confirmatory model of moral outcomes (Table 34). Thus, it would be safe to conclude that associations among the observed variables of moral outcomes (behavioral tendencies and attitudes toward behavioral outcomes) were better described in the revised confirmatory factor model for the Chinese urban cohort. Factor loadings of each confirmatory factor model were listed in Table 35, and all factor loadings were significant at the .05 level.

![Model 17 Modified Confirmatory Factor Model of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Rural-Town Group](image)

**Figure 19**

*Model 17 Modified Confirmatory Factor Model of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Rural-Town Group*

Chi-Square=25.16, df=25, P-value=0.45335, RMSEA=0.005
Figure 20
Model 18 Modified Confirmatory Factor Model of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Urban Group

Table 3
Selected Goodness-of-Fit Indices of Confirmatory Analysis Factor Models of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Rural-Town and the Urban Cohorts

<table>
<thead>
<tr>
<th>Model</th>
<th>χ²</th>
<th>df</th>
<th>p value</th>
<th>GFI</th>
<th>RMSEA</th>
<th>Standardized RMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural-town (N=252)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original model</td>
<td>236.62</td>
<td>34</td>
<td>&lt;.001</td>
<td>.84</td>
<td>.154</td>
<td>.065</td>
</tr>
<tr>
<td>Modified model</td>
<td>25.16</td>
<td>25</td>
<td>.45</td>
<td>.98</td>
<td>.005</td>
<td>.031</td>
</tr>
<tr>
<td>Urban (N=111)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original model</td>
<td>182.05</td>
<td>34</td>
<td>&lt;.001</td>
<td>.75</td>
<td>.199</td>
<td>.10</td>
</tr>
<tr>
<td>Modified model</td>
<td>51.66</td>
<td>28</td>
<td>&lt;.01</td>
<td>.91</td>
<td>.088</td>
<td>.073</td>
</tr>
</tbody>
</table>

Note: p-value was significant (<.05) for Chi-square in modified model for Chinese sample. However, theoretically, Chi-square is subjected to change and turned to be significant if a sample size is greater than 100.

Model comparison analyses were conducted to test the differences with regard to the confirmatory factor models of behavioral tendencies and the attitudes between the Chinese rural-town and the urban cohorts. As showed in Table 36, the results indicated that the global Chi-square was found to be $\chi^2 = 159.86$, $p < .001$, which decreased significantly when compared to the one with the global model with equal
factor loadings and error variances. Results revealed there were no significant
differences on factor loadings between the Chinese rural-town and urban cohorts, yet
error variance correlations varied between these two cohorts. That is, statically, the
Chinese rural-town cohort was similar to the Chinese urban cohort in perceiving
behavioral tendencies and attitudes toward behavioral outcomes.

Table 35
Standardized Estimates for Factor Confirmatory Model of Moral Behavioral Tendencies
and Attitudes toward Behavioral Outcomes for the Chinese Rural-Town and Chinese the
Urban Students

<table>
<thead>
<tr>
<th></th>
<th>Chinese Rural-Town (N =252)</th>
<th>Chinese Urban (N = 111)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Original model</td>
<td>Modified model</td>
</tr>
<tr>
<td>Factor loadings:</td>
<td></td>
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<td>Social cooperation</td>
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<td>.67</td>
</tr>
<tr>
<td>Cheating</td>
<td>.68</td>
<td>.58</td>
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<tr>
<td>Stealing</td>
<td>.79</td>
<td>.78</td>
</tr>
<tr>
<td>Self-serving</td>
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<td>.45</td>
</tr>
<tr>
<td>Aggressive behavior</td>
<td>.62</td>
<td>.63</td>
</tr>
<tr>
<td>A_Social cooperation</td>
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<td>.78</td>
</tr>
<tr>
<td>A_Cheating</td>
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<td>.79</td>
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<tr>
<td>A_Stealing</td>
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<td>.82</td>
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<tr>
<td>A_Self-serving</td>
<td>.76</td>
<td>.77</td>
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<td>A_Aggressive behavior</td>
<td>.76</td>
<td>.76</td>
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<tr>
<td>Measurement error variances:</td>
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<td>Cheating</td>
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<tr>
<td>Stealing</td>
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<td>.40</td>
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<tr>
<td>Self-serving</td>
<td>.75</td>
<td>.79</td>
</tr>
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<td>Aggressive behavior</td>
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<td>.60</td>
</tr>
<tr>
<td>A_Social cooperation</td>
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<td>.40</td>
</tr>
<tr>
<td>A_Cheating</td>
<td>.42</td>
<td>.37</td>
</tr>
<tr>
<td>A_Stealing</td>
<td>.30</td>
<td>.32</td>
</tr>
<tr>
<td>A_Self-serving</td>
<td>.42</td>
<td>.41</td>
</tr>
<tr>
<td>A_Aggressive behavior</td>
<td>.43</td>
<td>.43</td>
</tr>
</tbody>
</table>

Note: 1. A_Social cooperation=Attitude toward social cooperation, A_Cheating= Attitude toward cheating,
A_Stealing=Attitude toward stealing, A_Self-serving= Attitude toward self-serving purpose, A_Aggressive
behavior= Attitude toward aggressive behavior.
2. All factor loadings were significant at the .05 level.
Table 36

Model Comparison of Confirmatory Factor Model of Behavioral Tendencies and Attitudes toward Behavioral Outcomes between the Chinese Rural-Town Cohort (N=252) and the Chinese Urban Cohort (N=111)

<table>
<thead>
<tr>
<th>Observed variable</th>
<th>Chinese Rural-Town (Model 19)</th>
<th>Chinese Urban (Model 20)</th>
<th>Equal factor loading Model</th>
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</thead>
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<td>Social cooperation</td>
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<td>.64</td>
<td>.68</td>
</tr>
<tr>
<td>Cheating</td>
<td>.58</td>
<td>.61</td>
<td>.57</td>
</tr>
<tr>
<td>Stealing</td>
<td>.78</td>
<td>.61</td>
<td>.72</td>
</tr>
<tr>
<td>Self-serving purpose</td>
<td>.45</td>
<td>.50</td>
<td>.45</td>
</tr>
<tr>
<td>Aggressive behavior</td>
<td>.63</td>
<td>.46</td>
<td>.59</td>
</tr>
<tr>
<td>Attitude toward social cooperation</td>
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<td>.68</td>
<td>.75</td>
</tr>
<tr>
<td>Attitude toward Stealing</td>
<td>.82</td>
<td>.84</td>
<td>.83</td>
</tr>
<tr>
<td>Attitude toward self-serving purpose</td>
<td>.77</td>
<td>.83</td>
<td>.79</td>
</tr>
<tr>
<td>Attitude toward aggressive behavior</td>
<td>.76</td>
<td>.71</td>
<td>.75</td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>25.16</td>
<td>51.66</td>
<td>159.86</td>
</tr>
<tr>
<td>Degree of freedom</td>
<td>25</td>
<td>28</td>
<td>74</td>
</tr>
<tr>
<td>p value</td>
<td>.45</td>
<td>&lt;.01</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note: 1. Degrees of freedom for Chinese rural-town model and Chinese urban model differ because of different error covariance correlations.
2. For model with equal factor loading and equal error variance correlation: $\chi^2 = 176.55, df=80, p < .001$.
3. △$\chi^2 = 16.69, \Delta df=6$, at the .05 level of significance ($\chi^2 = 12.592, df=6$).
4. All factor loadings were significant at the .05 level.

Section Three: SEM Relationships among the Variables of Research

Modeling the links between variables using SEM. In this section, structural equation modeling models were built to determine predictive relationships among moral judgment, the Confucian self, and behavioral tendencies and attitudes toward behavioral outcomes across cultures and areas. Structural equation modeling is an approach that establishes relationships among psychological constructs through identifying observed variables (Schumacker & Lomax, 2010). There are two steps in the SEM process, including the measurement phase and structural phase (Schumacker
In this study, the measurement phase focused on appropriately assessing latent variables of interest, i.e., the Confucian self, moral behavioral tendencies, and attitudes toward behavioral outcomes. These variables were adequately represented via confirmatory factor analysis models and model-fit indices. Results in Section 1 and Section 2 had separately identified latent variables of the Confucian self, moral behavioral tendencies, and attitudes toward behavioral outcomes for cross-cultural samples and Chinese cross-regional samples, which were imperative because they enabled accurate estimation of these variables of interest and provided foundations of later structural analyses.

In the second phase (structural phase), structural relationships among the defined the Confucian self, moral judgment, behavioral tendencies and attitudes toward behavioral outcomes were assessed and goodness-of-fit indices were calculated. This phase allowed us to better understand the respective contribution of the Confucian self and moral judgment to behavioral tendencies and attitudes toward behavioral outcomes.

Question 6: Do measures of moral judgment and the Confucian self predict moral behavioral tendencies differently in samples of U.S. students and Chinese students?

As stated in Chapter Two, Question 6 mainly explored cross-cultural differences on relationships among the Confucian self, moral judgment, and behavioral tendencies and attitudes toward behavioral outcomes. In order to clarify the relationships between the variables, social desirability was used to insure the obtained relationships could not be attributed to an appropriate test-taking set.
Correlations and partial correlations. Descriptive analyses were presented in earlier Sections for moral judgment (DIT-2 scores), the Confucian self, behavioral tendencies, attitudes toward behavioral outcomes, and social desirability for both the Chinese and the American cohorts. Correlations among DIT-2 scores (moral judgment indices), the Confucian self, behavioral tendencies, attitudes toward behavioral outcomes were computed (Table 37). Also, partial correlations were calculated for these variables of interest by controlling social desirability (Table 38). For the Chinese sample, as illustrated in Table 38, the results showed that DIT scores were significantly correlated with each other at the .01 level of significance. The Maintaining Norms scores were found to significantly correlate with behavioral tendencies, \( r(380) = .11, p < .05 \), and the Postconvational thinking scores (P scores) were found to significantly negatively correlate with social desirability, \( r(380) = -.13, p < .01 \). The Confucian self significantly negatively correlated with the Personal Interest scores, \( r(380) = -.11, p < .05 \), while it was significantly positively correlated with the Maintaining Norms scores \( r(380) = .11, p < .05 \), moral behavioral tendencies, \( r(380) = .13, p < .01 \), attitudes toward behavioral outcomes, \( r(380) = .17, p < .01 \), and social desirability, \( r(380) = .25, p < .01 \). The variable of behavioral tendencies was found to be significantly correlated with attitudes toward behavioral outcomes, \( r(380) = .36, p < .01 \), and significantly positively correlate with social desirability, \( r(380) = .13, p < .01 \). Attitudes toward behavioral outcomes significantly negatively correlated with social desirability, \( r(380) = -.22, p < .01 \). When controlling social desirability, compared to correlations stated in Table 39, the results (Table 40) presented that the Confucian self became significantly correlated with N2 score, \( r(380) = .11, p < .05 \), but no significant correlation with behavioral tendencies was observed. Still, the Confucian self was significantly correlated with attitudes toward behavioral outcomes, \( r(380) = .12, p < .05 \).
For the American sample, the results (Table 37) indicated that DIT-2 scores were found to be significantly correlated with each other, but none of them exhibited significant correlation with moral behavioral tendencies, attitudes toward behavioral outcomes, or social desirability. Unlike the Chinese cohort, American students’ Confucian self significantly related to P scores, $r(250)=.14, p<.05$, N2 scores, $r(250)=.14, p<.05$, moral behavioral tendencies, $r(250)=.29, p<.01$, attitudes toward behavioral outcomes, $r(380)=.27, p<.01$, and social desirability, $r(250)=.18, p<.01$. Consistent with the Chinese cohort, the American students’ self-reported behavioral tendencies were found to be significantly correlated with attitudes toward behavioral outcomes, $r(250)=.57, p<.01$. Social desirability significantly correlated with behavioral tendencies, $r(250)=.32, p<.01$, and correlated with attitudes toward behavioral outcomes, $r(250)=.27, p<.01$. When controlling social desirability, compared to correlations in Table 38, the results of partial correlations for the American sample still indicated that DIT-2 scores significantly correlated with behavioral tendencies or attitudes toward behavioral outcomes, and the Confucian self significantly correlated with behavioral tendencies, $r(250)=.25, p<.01$, and attitudes toward behavioral outcomes, $r(250)=.24, p<.01$. Also, attitudes toward behavioral outcomes significantly correlated with self-reported behavioral tendencies, $r(250)=.53, p<.01$.

When comparing the results summarized in Table 38 and Table 39, correlations among the Confucian self, moral behavioral tendencies, and attitudes toward behavioral outcomes for the American cohort appeared to be stronger than those within the Chinese cohort. Specifically, the Confucian self significantly correlated with P scores and N2 scores for the America sample, but not for the Chinese sample. The results of the comparisons among the variables of interest between the Chinese
and the American cohorts indicated that significant differences were found on correlations between the Personal Interest scores and Maintaining norms scores, $Z=2.21, p=.03$, Personal interest scores and N2 scores, $Z=-2.11, p=.03$, Confucian self and moral behavioral tendencies, $Z=-2.05, p=.04$, and moral behavioral tendencies and attitudes toward behavioral outcomes, $Z=-3.31, p<.01$, suggesting that the Chinese and the American samples differently perceived the relationships between the Confucian self and moral behavioral tendencies, and moral behavioral tendencies and attitudes toward behavioral outcomes.

In addition, social desirability seemed to more strongly relate to the Confucian self and moral behavioral tendencies for the Chinese students than the American students. A significant difference in correlation between these two samples was only found between moral behavioral tendencies and attitudes toward behavioral outcomes, $Z=-3.56, p<.01$. Such a difference of correlation was enhanced when social desirability was controlled. Further analyses were conducted to unfold statistical relationships among moral judgment, the Confucian self, and moral behavioral tendencies and attitudes toward behavioral outcomes.
Table 37
Correlations among DIT scores, Confucian Self, and Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese cohort and the American Cohort

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PI</td>
<td>−</td>
<td>-.54**</td>
<td>-.45**</td>
<td>-.49**</td>
<td>0.04</td>
<td>0.01</td>
<td>0.05</td>
<td>-0.05</td>
</tr>
<tr>
<td>2. MN</td>
<td>-.40**</td>
<td>−</td>
<td>-.36**</td>
<td>-.21**</td>
<td>0.09</td>
<td>0.1</td>
<td>0.11</td>
<td>0.05</td>
</tr>
<tr>
<td>3. PS</td>
<td>-.56**</td>
<td>-.35**</td>
<td>−</td>
<td>.85**</td>
<td>.14*</td>
<td>0.02</td>
<td>-0.09</td>
<td>-0.07</td>
</tr>
<tr>
<td>4. N2</td>
<td>-.61**</td>
<td>-.16**</td>
<td>.88**</td>
<td>−</td>
<td>14*</td>
<td>0.002</td>
<td>-0.1</td>
<td>-0.09</td>
</tr>
<tr>
<td>5. CS</td>
<td>-.11*</td>
<td>.11*</td>
<td>.04</td>
<td>.08</td>
<td>−</td>
<td>.29**</td>
<td>.27**</td>
<td>.18**</td>
</tr>
<tr>
<td>6. MBT</td>
<td>.10</td>
<td>.11*</td>
<td>-.10</td>
<td>-.03</td>
<td>.13**</td>
<td>−</td>
<td>.57**</td>
<td>.32**</td>
</tr>
<tr>
<td>7. AMB</td>
<td>-.07</td>
<td>.10</td>
<td>-.09</td>
<td>-.06</td>
<td>.17**</td>
<td>.36**</td>
<td>−</td>
<td>.27**</td>
</tr>
<tr>
<td>8. SD</td>
<td>-.01</td>
<td>.04</td>
<td>-.13**</td>
<td>-.09</td>
<td>.25**</td>
<td>.40**</td>
<td>.22**</td>
<td>−</td>
</tr>
</tbody>
</table>

Note:
1. *: p<.05; **: p<.01
2. PI=Personal Interest, MN=Maintaining Norms, PS=Postconventional thinking score, N2= New index for Postconventional thinking score, CS=Confucian Self, MBT=Moral behavioral tendencies, AMB=Attitudes toward behavioral outcomes, SD= Social desirability.
3. American sample (N=250) is presented above the diagonal. Chinese sample (N=380) is presented below the diagonal.
4. Correlations highlighted with the same color indicate significant Z-value between the cohort, suggesting significantly different correlations between the two variables for the Chinese and the American cohorts.
Table 38
Partial Correlations among DIT Scores, Confucian Self, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes by Controlling Social Desirability for the Chinese cohort and the American Cohort

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PI</td>
<td></td>
<td>-.53**</td>
<td>-.46**</td>
<td>-.49**</td>
<td>-0.05</td>
<td>-.03</td>
<td>0.02</td>
</tr>
<tr>
<td>2. MN</td>
<td>-.40**</td>
<td></td>
<td>-.36**</td>
<td>-.20**</td>
<td>0.08</td>
<td>0.09</td>
<td>0.1</td>
</tr>
<tr>
<td>3. PS</td>
<td>-.57**</td>
<td>-.35**</td>
<td></td>
<td>.85**</td>
<td>.16*</td>
<td>0.05</td>
<td>0.07</td>
</tr>
<tr>
<td>4. N2</td>
<td>-.61**</td>
<td>-.16**</td>
<td>.88**</td>
<td></td>
<td>.16*</td>
<td>0.03</td>
<td>0.08</td>
</tr>
<tr>
<td>5. CS</td>
<td>-.11*</td>
<td>.11*</td>
<td>.07</td>
<td>.11*</td>
<td></td>
<td>.25**</td>
<td>.24**</td>
</tr>
<tr>
<td>6. MBT</td>
<td>.01</td>
<td>.10*</td>
<td>-.05</td>
<td>.01</td>
<td>.04</td>
<td></td>
<td>.53**</td>
</tr>
<tr>
<td>7. AMB</td>
<td>-.07</td>
<td>.10</td>
<td>.06</td>
<td>.04</td>
<td>.12*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:
1. *: p<.05; **: p< .01.
2. PI=Personal Interest, MN=Maintaining Norms, PS=Postconventional thinking score, N2= New index for Postconventional thinking score, CS=Confucian Self, MBT=Moral behavioral tendencies, AMB=Attitudes toward behavioral outcomes.
3. American sample (N=250) is presented above the diagonal. Chinese sample (N=380) is presented below the diagonal.
4. Correlations highlighted with the same color indicate significant Z-value between the cohort, suggesting significantly different correlations between the two variables for the Chinese and the American cohorts.
**Relationships among the Confucian self, moral behavioral tendencies, and attitudes toward behavioral outcomes.** SEM models were produced to determine relationships among the Confucian self, behavioral tendencies and attitudes toward behavioral outcomes across cultures. Earlier confirmatory factor models were verified for the American and the Chinese cohorts in Section 1, which presented a precise estimation of the constructs of interest to the SEM component of the study.

For the American cohort, SEM model (Model 19, Figure 21) examined the contribution of the Confucian self variable to the moral behavioral tendencies and attitudes toward behavioral outcome variables. The results showed that Chi-square was $\chi^2 (114, N=250) = 166.56, p<.001$ (may have been caused because of a large sample size), with RMSEA = .043, GFI=.93, and Standardized RMR=.045. Although GFI was lower than the cut-off rule (GFI<.95), other model-fit indices were acceptable or good, indicating this SEM model, depicting relationships among the Confucian self, behavioral tendencies and attitudes toward behavioral outcomes, was still an acceptable one. In this SEM model, the Confucian self significantly predicted moral behavioral tendencies, $T=3.24$, and attitudes toward behavioral outcomes, $T=3.78$, at the $p<.05$ level. Attitudes toward behavioral outcomes was found to significantly predict behavioral tendencies, $T=7.64, p<.05$. As stated in Section 1, although the American students did not well distinguish sub-components of the Confucian self, it appeared that one’s consistency with Confucian self (to some extent, called moral self in the West) is an important part of moral integrity to behavioral tendencies and one’s attitudes toward behavioral outcomes. Also, the American students’ behavioral tendencies were consistent with and could be predicted by their attitudes toward behavioral outcomes.
Chi-Square=166.56, df=114, P-value=0.00097, RMSEA=0.043

Figure 21
Model 19 SEM Model of Confucian Self and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the American Sample
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

Consistent with the American cohort, Model 22 (Figure 20) addressed how the Confucian self, behavioral tendencies and attitudes toward behavioral outcomes related with each other for the Chinese cohort. Results reported Chi-square was $\chi^2 (115, N=380) = 158.86, p<.01$, RMSEA=.032, GFI=.96, and Standardized RMR=.044, with no further modification suggested. It was still reasonable to consider this structural model as an acceptable one, although Chi-square was found to be significant at the $p<.01$ level. Further results indicated that the Confucian self significantly predicted moral behavioral tendencies, $T=1.98$, and attitudes toward behavioral outcomes, $T=3.12$, at the $p<.05$ level. Again, attitudes were also found to significantly predict moral behavioral tendencies, $T=5.70$, at the $p<.05$ level. It seemed that being consistent with Confucian self is associated with a higher score of moral behavioral tendencies and holding a less acceptable attitude toward misconducts. Similarly, holding a less acceptable attitude toward misconducts indicated a more acceptable behavioral tendency.
Chi-Square=158.86, df=115, P-value=0.00424, RMSEA=0.032

Figure 22
Model 20 SEM Model of Confucian Self and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Sample
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

The SEM models for relationships among the Confucian self and behavioral tendencies and attitudes toward behavioral outcomes between the American cohort (Model 19) and the Chinese cohort (Model 20) were compared. It was noticed that, although no obvious difference was shown on the degree of freedoms of the SEM models for the American cohort and the Chinese cohort, there were more error variance correlations among observed variables of the Confucian self for the American cohort, whereas there were more error variance correlations among observed variables of behavioral tendencies and attitudes toward behavioral outcomes for the Chinese students. It appeared that the American students were more capable than the Chinese students of spelling out differences among behavioral activities and attitudes toward these behavioral conducts, while the Chinese students were more competent to distinguish differences among the Confucian self. In order to obtain statistical differences between the SEM models across cultures, model comparisons
were conducted. According to Table 39, the results revealed that the change in index of Chi-squares between Model comparison 1 and Model comparison 7 was $\Delta \chi^2 = 20.66$, $\Delta df=2$, which was significant at the .05 level. Such results indicated that the paths from the Confucian self to moral behavioral tendencies and the paths from the Confucian self to attitudes toward behavioral outcomes varied, while the paths from the Confucian self to the attitudes were invariant between the American and the Chinese samples. In other words, with exception for the relationship between the Confucian self and the attitudes, the Confucian self and the attitudes differently predicted behavioral tendencies for the American and the Chinese cohorts.

<table>
<thead>
<tr>
<th>Model comparison</th>
<th>CS→mbt</th>
<th>CS→amb</th>
<th>AMB→mbt</th>
<th>$\Delta \chi^2$</th>
<th>$\Delta df$</th>
<th>$\Delta \chi^2_{1}$</th>
<th>$\Delta df_{1}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC 1</td>
<td>E</td>
<td>E</td>
<td>E</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MC 2</td>
<td>U</td>
<td>E</td>
<td>E</td>
<td>2.51</td>
<td>1</td>
<td>18.15*</td>
<td>1</td>
</tr>
<tr>
<td>MC 3</td>
<td>U</td>
<td>U</td>
<td>E</td>
<td>2.36</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MC 4</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>16.54*</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MC 5</td>
<td>E</td>
<td>U</td>
<td>U</td>
<td>13.73*</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MC 6</td>
<td>E</td>
<td>E</td>
<td>U</td>
<td>13.84*</td>
<td>1</td>
<td>6.82*</td>
<td>1</td>
</tr>
<tr>
<td>MC 7</td>
<td>U</td>
<td>E</td>
<td>U</td>
<td>20.66*</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MC 8</td>
<td>E</td>
<td>U</td>
<td>E</td>
<td>-4.08</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:
1. MC 1=Type of model comparison 1, MC 2=Type of model comparison 2, MC 3=Type of model comparison 3, MC 4=Type of model comparison 4, MC 5=Type of model comparison 5, MC 6=Type of model comparison 6, MC 7=Type of model comparison 7, MC 8=Type of model comparison 8.
2. CS→mbt: indicates a path from Confucian self to moral behavioral tendency.
3. CS→amb: indicates a path from Confucian self to attitudes toward behavioral outcomes.
4. AMB→mbt: indicates a path from attitudes toward behavioral outcomes to behavioral outcomes.
5. E=Equal: set invariant path for the two models.
6. U=Unequal: set variant paths for the two models.
7. $\Delta \chi^2$: indicates decrease in Chi-square from MC1 to other type of model comparison.
8. $\Delta df$: indicates difference in degree of freedom between MC1 and other type of model comparison.
9. $\Delta \chi^2_{1}$: indicates decrease in Chi-square of MC7 from MC2 or MC6.
10. $\Delta df_{1}$: indicates difference in degree of freedom between MC7 and MC2 or MC6.
11. $\chi^2_{0.05}=3.841$, $df=1$; $\chi^2_{0.05}=5.991$, $df=2$; $\chi^2_{0.05}=7.815$, $df=3$ (according to $\chi^2$ table).13
12. *: indicates a significant change between two types of model comparison.

13 $\chi^2$ table: See Appendix H.
Social desirability. Social desirability may be a potential threat that influences research results. In this part, social desirability was again controlled when determining predictive associations among the Confucian self, behavioral tendencies, and attitudes toward behavioral outcomes. For the American cohort, the results showed that Chi-square was $\chi^2 (130, N=250) = 219.09, p < .01$, GFI = .92, RMSEA = .052, and SRMR = .049 in Model 21 (Figure 23). Using the cut-off criteria mentioned earlier, it was reasonable to regard this SEM model as an acceptable one. Both the Confucian self and social desirability significantly predicted moral behavioral tendencies, (T=3.06 for Confucian self and T=2.60 for social desirability) and attitudes toward behavioral outcomes (T=3.26 for Confucian self and T=3.60 for social desirability) at the .05 level of significance. Compared to Model 21, it seemed that the attendance of social desirability did not affect the functions of the Confucian self in behavioral tendencies and attitudes toward behavioral outcomes.

\[
\text{Chi-Square}=219.09, \text{df}=130, \text{P-value}=0.0000, \text{RMSEA}=0.052
\]

Figure 23
Model 21 SEM Model of Confucian Self, Social Desirability, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the American Sample
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

When social desirability was controlled for the Chinese cohort (Model 22), the
results of the SEM model provided selected model-fit indices, including Chi-square $\chi^2$ (130, N=380) = 200.43, $p < .001$, GFI =.95, RMSEA=.038, and Standardized RMR= .045. Similarly, this structural equation model was found to be an acceptable one. On the other hand, the results pointed out that the Confucian self lost its significant relationships with moral behavioral tendencies and attitudes toward behavioral outcomes, when compared to Model 2. As illustrated in Model 2, social desirability replaced the Confucian self and dominated its significant relationships with behavioral tendencies and attitudes toward behavioral outcomes.

Figure 24
*Model 22 SEM Model of Confucian Self, Social desirability, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Sample*

When comparing the SEM models between the American cohort (Model 21) and the Chinese cohort (Model 22), the main difference resided in whether participation of social desirability took over significant roles of the Confucian self in predicting behavioral tendencies and attitudes toward behavioral outcomes. Apparently, social desirability did not affect the central roles of the Confucian self for the American cohort but it did for the Chinese cohort. It appeared that Chinese students focused on
socially desirable responses and did not honestly respond to questionnaire in this study.

**Relation between moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes.** Relationships among moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes were described in this part. For the American cohort, the results of Model 23 (Figure 25) presented selected model-fit indices, Chi-square $\chi^2$ (36, N=250) = 49.35, $p=.07$, and RMSEA = .039, GFI=.97, and Standardized RMR=.04, without additional modifications were suggested, indicating a good fitting SEM model. Moral judgment did not significantly predict moral behavioral tendencies or attitudes toward behavioral outcomes. Only attitudes toward behavioral outcomes significantly predicted moral behavioral tendencies, $T=8.27$ at the .05 level.

For the Chinese cohort, a similar SEM model was generated. SEM model fit indices were computed, including Chi-square $\chi^2$ (32, N=380) = 62.69, $p<.001$, RMSEA = .05, GFI=.97, and Standardized RMR=.038. Although not all indices achieved good fitting levels, it was still reasonable to consider such a SEM model (Model 24, Figure 26) was an acceptable one that identified relationships among moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes. Consistent with the American cohort, moral judgment did not significantly predict moral behavioral tendencies or attitudes toward behavioral outcomes. Only attitudes toward behavioral outcomes significantly predicted moral behavioral tendencies, $T=6.04$, at $p<.05$ level. When comparing these two models (Model 25 & Model 26), the role of attitudes toward behavioral outcomes differed in predicting behavioral tendencies significantly between the American and Chinese students ($\triangle \chi^2=11.99$, $\triangle$
The analysis revealed that American students' attitudes accounted for more than the Chinese students' behavioral performance. Chi-Square = 49.35, df = 36, P-value = 0.06824, RMSEA = 0.039

**Figure 25**
*Model 23 SEM Model of Moral Judgment and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the American Sample*
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

Social desirability was added to the model as a control variable for relationships. Chi-Square = 62.69, df = 32, P-value = 0.0095, RMSEA = 0.050

**Figure 26**
*Model 24 SEM Model of Moral Judgment and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Sample*
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.
among moral judgment, behavioral tendencies, and attitudes toward behavioral misconducts. For the American cohort in Model 25 (Figure 27), Chi-square was found to be $\chi^2 (44, N=250)=75.85$, $p<.01$, with RMSEA=.054, GFI =.95, and Standardized RMR=.047 (SRMR<.05 is good). Not surprisingly, only social desirability exhibited its significant role on moral behavioral tendencies, $T=2.92$, and attitudes toward behavioral outcomes, $T=3.77$, $p<.05$. As in the Model 25, moral judgment still remained nonsignificant in explaining moral behavioral tendencies and attitudes toward behavioral outcomes.

Chi-Square=75.85, df=44, P-value=0.00201, RMSEA=0.054

Figure 27
Model 25 SEM Model of Moral Judgment, Social Desirability, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the American Sample
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

For the Chinese cohort in Model 26 (Figure 28), the results presented that
Chi-square was $\chi^2 (40, N=380) = 75.01$, $p<.001$, with GFI =.97, RMSEA=.048, and Standardized RMR=.039. It was reasonable to regard this SEM model as an acceptable one, though Chi-square was found to be significant at the .01 level of significance. Again, social desirability was found to statistically significantly predict
moral behavioral tendencies (T=6.29, p<.05) and attitudes toward behavioral outcomes (T=4.09, p<.05). Unfortunately, moral judgment did not play a significant role in either predicting moral behavioral tendencies or attitudes toward behavioral outcomes. The variable of attitudes toward behavioral outcomes was still significantly associated with moral behavioral tendencies (T=4.27, p<.05). It seemed that social desirability played a more important role in the variance of behavioral tendencies and attitudes toward behavioral outcomes for both the American cohort and the Chinese cohort.

Figure 28
Model 26 SEM Model of Moral Judgment, Social Desirability, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Sample
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

Relationships among the Confucian self, moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes. Relationships among moral judgment, the Confucian self, behavioral tendencies, and attitudes toward behavioral outcomes were examined in the Model 27 (Figure 29). For the American group, the results reported that Chi-square $\chi^2 (130, N=250) = 215.97, p<.001$, RMSEA = .052,
GFI=.92, and Standardized RMR=.049. Although not all model-fit indices were well satisfied, it was still an acceptable model that established relationships among Confucian self, moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes. Compared to the Model 19 and the Model 23, it was noted that moral judgment was significant in predicting behavioral tendencies with the presence of the Confucian self in the Model 28, T= -2.51, p<.05. The Confucian self statistically significantly predicted both moral behavioral tendencies, T=2.94, and attitudes toward behavioral outcomes, T=4.28, at the .05 level of significance. Attitudes toward behavioral outcomes still significantly predicted moral behavioral tendencies, T=7.52, p< .05.

Since moral judgment did not demonstrate a significant role in explaining moral behavioral tendencies, its path to behavioral tendencies was removed to determine a better fit model. Selected model-fit indices included $\chi^2 (131, N=250) =216.39, p<.001$, RMSEA = .051, GFI=.92, and Standardized RMR=.048 in Model 28 (Figure 30). The results indicated that both moral judgment and the Confucian self significantly predicted attitudes toward behavioral outcomes, T= -2.51 and T=4.27, at the .05 level of significance. Only the Confucian self remained a predictive role in moral behavioral tendencies, T=3.25, p<.05. Although no significant improvement was found in the Model 28, when compared to the Model 27, no extra model modifications were suggested. The Model 28 therefore could be considered as the final best fitting SEM model that identified associations among the Confucian self, moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes for the American cohort.
Figure 29
Model 27 SEM Model of Confucian Self, Moral Judgment, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the American Sample
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

Chi-Square=215.97, df=130, P-value=0.0000, RMSEA=0.052

Figure 30
Model 28 SEM Model of Confucian Self, Moral Judgment, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the American Sample (without a path from moral judgment to moral behavioral tendencies)
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

Chi-Square=216.39, df=131, P-value=0.0000, RMSEA=0.051
Consistent with the SEM model for the American cohort, a similar SEM model (Model 29) was produced for the Chinese cohort. The results presented model-fit indices, such as Chi-square $\chi^2(130, N=380) = 188.69, p<.001$, RMSEA = .035, GFI=.95, and Standardized RMR=.045. Similarly, although not all model-fit indices were well satisfied, it was still reasonable to consider such model was an acceptable one, which identified links among the Confucian self, moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes. More specifically, compared with the Model 20, the Confucian self was only found to significantly predict attitudes toward behavioral outcomes, $T= 3.27$, at the .05 level of significance, but not moral behavioral tendencies. Similar to the relationships in the Model 24, moral judgment in this SEM model did not exhibit its significant relationships with moral behavioral tendencies or attitudes toward behavioral outcomes. Attitudes toward behavioral outcomes significantly predicted behavioral outcomes, $T=5.68$, at the .05 level of significance.

Figure 31
Model 29 SEM Model of Confucian Self, Moral Judgment, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Sample
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.
Accordingly, the nonsignificant structural relationship between moral judgment and self-reported behavioral tendencies was removed and a revised model was reproduced to establish a more appropriate structural relationship model among the Confucian self, moral judgment, and attitudes toward behavioral outcomes (Model 30, Figure 32). The results indicated that Chi-square was found to be $\chi^2 (131, N=380) = 188.78, p<.001$, with GFI = .95, RMSEA = .034, and Standardized RMR= .045. Like the Model 29, Model 30 could be an acceptable one, though Chi-square was still significant, which may have been caused by the large sample size. In this model (Model 30), only the Confucian self significantly predicted moral behavioral tendencies, $T=1.99$, and attitudes toward behavioral outcomes, $T=3.34$, at the .05 level of significance. Moral judgment did not exhibit its significantly predictive relationship with attitudes toward behavioral outcomes for the Chinese sample. Like the relationships presented in other SEM models in this study, attitudes toward behavioral outcomes still significantly predicted behavioral tendencies, $T=5.70$. At this point, the Model 20 (illustrated earlier) turned out to be the best fitting structural equation model that described the associations among the Confucian self, behavioral tendencies and attitudes toward behavioral outcomes for the Chinese students.
Figure 32
Model 30 SEM Model of Confucian Self, Moral Judgment, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Sample (without a path from moral judgment to moral behavioral tendencies)

Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

Relationships among the Confucian self, moral judgment, behavioral tendencies and attitudes toward behavioral outcomes, and social desirability.

As stated earlier, although social desirability may have been differently perceived across cultures, it was still of interest to examine the relationships among Confucian self, moral judgment, behavioral tendencies and attitudes toward behavioral outcomes by controlling social desirability for two cohorts. For the American sample, a SEM model was produced (Model 31, Figure 33) and the results stated that Chi-square was $\chi^2 (145, N=250) = 264.69, p<.01$, with GFI=.90, RMSEA=.058, and Standardized RMR=.052, indicating an acceptable one. Compared to the Model 28, this SEM model again confirmed that moral judgment significantly predicted attitudes toward behavioral outcomes, $T=1.96$, at the .05 level. The Confucian self significantly predicted moral behavioral tendencies, $T=2.63$, and attitudes toward behavioral
outcomes, $T=3.66$, at the .05 level. Furthermore, social desirability was also found to significantly predict moral behavioral tendencies, $T=2.66$, and attitudes toward behavioral outcomes, $T=3.23$, at the .05 level of significance. Compared to the Model 27 and the Model 31, moral judgment exerted slight influence on self-reported behavioral tendencies, yet it did significantly predict attitudes toward behavioral outcomes. The Confucian self played a crucial role in both behavioral tendencies and attitudes toward behavioral outcomes. The presence of social desirability did not affect such the significant relationships among the Confucian self, moral judgment, behavioral tendencies, and the attitudes.

Figure 33
Model 31 SEM Model of Confucian Self, Moral Judgment, Social Desirability, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the American Sample
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

For the Chinese cohort, a similar SEM model was generated (Model 32). Selected model-fit indices reported Chi-square $\chi^2(145, N=380) = 226.12$, $p < .001$, GFI = .94, RMSEA = .038, and Standardized RMR = .045, which indicated an acceptable
structural model that identified the associations among the Confucian self, moral judgment, behavioral tendencies, attitudes toward behavioral outcomes, and social desirability for the Chinese cohort. The results indicated that the relationships between the Confucian self and the other variables were weakened when social desirability was controlled. Similar to the Model 22 and the Model 26, neither moral judgment nor the Confucian self significantly predicted moral behavioral tendencies or attitudes toward behavioral outcomes in this SEM model (Model 32). Unlike the American cohort (Model 31), it appeared that social desirability was the primary correlate of in behavioral activities and attitudes toward behavioral conducts for the Chinese cohort (Model 32). However, it is important to note again here, social desirability may have been differently perceived in the Chinese context and thus it may not properly tease out a Chinese way of measuring social desirability.

Chi-Square=226.12, df=145, P-value=0.0002, RMSEA=0.038

Figure 34
Model 32 SEM Model of Confucian Self, Moral Judgment, Social Desirability, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Sample
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.
When comparing structural relationships among the Confucian self, moral judgment, social desirability, behavioral tendencies and attitudes toward behavioral outcomes, it appeared that the Confucian self was independent from social desirability and significantly predicted behavioral tendencies and attitudes toward misbehaviors for the American cohort, but dependent for the Chinese cohort. Also, moral judgment was only found to significantly predict attitudes toward behavioral misconducts in a negative way. No similar significant relationship was found between moral judgment and moral behavioral tendencies. The results indicated that the higher postconventional thinking scores one reported, the less acceptable attitude one reported on misconducts. The similar relationship pattern between moral judgment and attitudes toward behavioral outcomes was found among the Chinese students, yet such a relationship was not strong.

Question 7: Do the Confucian self and moral judgment differently predict moral behavioral tendencies between the Chinese urban students and rural students?

**Relationships among the Confucian self, behavioral tendencies, and attitudes toward behavioral outcomes.** For the rural-town cohort, the structural relationships among the Confucian self, moral behavioral tendencies, and attitudes toward behavioral misconducts were depicted in Model 33 (Figure 35). Selected model-fit indices reported Chi-square $\chi^2 (119, N=252) = 129.26, p=.25, \text{GFI} =.95, \text{RMSEA}=.019, \text{and Standardized RMR}=.045$, with no further model modifications suggested, which indicated a good fitting model for the rural-town cohort. On the other hand, in this SEM model, the Confucian self was found not to significantly predict moral behavioral tendencies or attitudes toward behavioral misconducts. Only
attitudes toward behavioral misconducts significantly predicted behavioral tendencies, T=5.51, at the .05 level of significance.

\[
\chi^2 = 129.26, \text{ df}=119, P\text{-value}=0.24525, \text{RMSEA}=0.019
\]

Figure 35
Model 33 SEM Model of Confucian Self and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Rural-Town Group
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

For the urban cohort, predictive relationships among the Confucian self, moral behavioral tendencies, and attitudes toward behavioral misconducts were illustrated in Model 34 (Figure 36). Selected model-indices showed that Chi-square was \(\chi^2 (123, N=111) =147.88, p=.06\), with GFI =.87, RMSEA=.043, and Standardized RMR=.075. As stated earlier, although some of indices (GFI=.87) did not reach the established values (GFI=.95), other model-fit indices may lent their support to this SEM model as an acceptable one. Similar to the rural-town cohort, the Confucian self did not perform a significant role either in behavioral tendencies or in the attitudes. Unlike the rural-town cohort, attitudes toward behavioral outcomes did not significantly predict behavioral tendencies for the urban cohort, and some other unknown influential factors may account for behavioral tendencies for the urban cohort.
The Confucian self was found to become unimportant in predicting either moral behavioral tendencies or attitudes toward behavioral outcomes when categorizing Chinese students into two groups in terms of Chinese geographical area. The Confucian self did not distinguish in moral outcomes between the rural-town and the urban cohorts. The attitudes predicted behavioral tendencies for of the rural-town cohort but not for the urban cohort.

Chi-Square=147.88, df=123, P-value=0.06274, RMSEA=0.043

Figure 36
Model 34 SEM Model of Confucian Self and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Urban Group
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

Relationships among moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes. Associations among moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes were expressed in Model 35 (Figure 37). This SEM model achieved a good model fitting, such as Chi-square $\chi^2$ (123, N=252) =37.55, $p = .26$, GFI =.97, RMSEA=.023, and Standardized RMR=.036, without additional model modifications needed, indicating a good fitting model. Like the role of the Confucian self in the Model 33, moral judgment did not demonstrate its
significant prediction to either behavioral tendencies or attitudes toward behavioral misconduct. Yet attitudes toward behavioral misconducts significantly predicted their moral behavioral tendencies for rural-town cohort, T=5.59, at the .05 level of significance.

Chi-Square=37.55, df=33, P-value=0.26828, RMSEA=0.023

Figure 37
*Model 35 SEM Model of Moral Judgment and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Rural-Town Group*

Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

For the urban cohort, selected model-fit indices in Model 36 (Figure 38) did not well support structural relationships among moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes for the urban cohort, such as Chi-square $\chi^2 (123, N=111)=75.65, p<.001$, GFI =.89, RMSEA=.10, and Standardized RMR=.078. Paralleled to the rural-town cohort, the urban students’ moral judgment did not significantly predict either behavioral tendencies or attitudes toward behavioral outcomes. Unlike the rural-town cohort (Model 35), the urban students’ attitudes toward behavioral misconduct did not significantly predict moral behavioral tendencies. Such results were surprising that the attitudes seemed less important in
behavioral tendencies for the urban cohort while they were imperative for the rural-town cohort.

Figure 38
Model 36 SEM Model of Moral Judgment and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Urban Group
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

**Relationships among the Confucian self, moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes.** For the rural-town sample, the results presented a SEM model (Model 37, Figure 39) was acceptable one, Chi-square $\chi^2 (134, N=252) =153.88, p=.12, GFI =.94, RMSEA=.024, and Standardized RMR= .046$, without extra modifications needed. It was not surprising that neither the Confucian self nor moral judgment was found to significantly predict moral behavioral tendencies or attitudes toward behavioral outcomes for the rural-town cohort, which was consistent with the results found above (Model 33 & Model 35). Only attitudes toward behavioral misconducts significantly predicted behavioral tendencies, $T=5.51, p<.05$. 
Chi-Square=153.88, df=134, P-value=0.11517, RMSEA=0.024

Figure 39
Model 37 SEM Model of Confucian Self, Moral Judgment, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Rural-Town Group
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

For the urban cohort, the SEM model (Model 38, Figure 40) indicated poor fitting, Chi-square $\chi^2(138, N=252)=184.65, p<.01$, GFI=.85, RMSEA=.055, and Standardized RMR= .07. No significant relationships were found between the Confucian self and behavioral tendencies, and the Confucian self and attitudes toward misconducts. No significant relationships were established between moral judgment and behavioral tendencies, and between moral judgment and attitudes toward misconducts. Unlike the rural-town cohort, attitudes toward misconducts again did not significantly predict behavioral tendencies for the urban cohort. These results were not surprising, and were consistent with those relationships were examined earlier among the Confucian self, moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes (Model 34 & Model 36).
Chi-Square=184.65, df=138, P-value=0.00492, RMSEA=0.055

Figure 40

Model 38 SEM Model of Confucian Self, Moral Judgment, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Urban Group

Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

In short, the results of the Models 33 – 38 indicated that both the Confucian self and moral judgment were not significantly related to moral outcomes (moral behavioral tendencies and attitudes toward behavioral outcomes) for both the Chinese rural-town and the urban cohorts. Only attitudes toward behavioral outcomes performed significant roles in behavioral tendencies for the Chinese rural-town cohort.

Question 8: Do Chinese urban students differ from American students in moral judgment, the Confucian self and their moral behavioral tendencies, respectively?

Given that Chinese urban areas are more westernized, and societal and economic changes appear to have westernized Chinese urbanities to think and act in terms of a Western pattern. This question asked the difference between the American students
and the Chinese urban students and regional comparison was conducted to better understand similarity and differences may exist.

**Confucian self.** According to the results of confirmatory factor analyses for the American and the Chinese urban cohort, visually, the confirmatory factor model of the Confucian self for the American cohort (Model 6) was found to be different from that of the Chinese urban cohort (Model 14), especially in error variance correlations. Statistical comparison confirmed that there was a significant difference between two confirmatory factor models of the Confucian self, $\Delta \chi^2=175.36$, $\Delta df=17$, indicating factor loadings and error variances were variant between these two groups (Table 4).

<table>
<thead>
<tr>
<th>Model comparison</th>
<th>Factor loadings</th>
<th>Error variances</th>
<th>$\Delta \chi^2$</th>
<th>$\Delta df$</th>
<th>$\Delta \chi^2_{1}$</th>
<th>$\Delta df_{1}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC 1</td>
<td>E</td>
<td>E</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MC 2</td>
<td>E</td>
<td>U</td>
<td>149.01*</td>
<td>10</td>
<td>26.35*</td>
<td>7</td>
</tr>
<tr>
<td>MC 3</td>
<td>U</td>
<td>E</td>
<td>28.93*</td>
<td>8</td>
<td>146.43*</td>
<td>9</td>
</tr>
<tr>
<td>MC 4</td>
<td>U</td>
<td>U</td>
<td>175.36*</td>
<td>17</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 40
*Model Comparison of CFA Models of Confucian Self between the American (N=250) and Chinese Urban Cohorts (N=111)*

Note:
1. MC 1= Type of model comparison 1, MC 2= Type of model comparison 2, MC 3= Type of model comparison 3, MC 4= Type of model comparison 4.
2. E=Equal: set invariant path for two models.
3. U=Unequal: set variant paths for two models.
4. $\Delta \chi^2$: indicates decrease in Chi-square from MC1 to other type of model comparison
5. $\Delta df$: indicates difference in degree of freedom between MC1 and other type of model comparison
6. $\Delta \chi^2_{1}$: indicates decrease in Chi-square of MC4 from MC2 or MC3
7. $\Delta df_{1}$: indicates difference in degree of freedom between MC4 and MC2 or MC3
8. $\chi^2_{05}=27.587$, $df=17$; $\chi^2_{05}=15.507$, $df=8$; $\chi^2_{05}=18.307$, $df=10$; $\chi^2_{05}=14.067$, $df=7$; $\chi^2_{05}=16.010$, $df=9$ (according to $\chi^2$ table (14)).
9. *: indicates a significant change between two types of model comparison.

**Moral behavioral tendencies and attitudes toward behavioral outcomes.**

Addressing differences of behavioral tendencies and attitudes toward behavioral outcomes, the results of the CFA model comparisons presented that both factor

---

14 $\chi^2$ table: See Appendix H.
loadings and error variances of moral outcomes for the American cohort were significantly distinct from those for the Chinese urban cohort, $\triangle \chi^2=143.89$, $\triangle df=16$.

As such, it seemed that the American students and the Chinese urban students were not identical in behavioral performance and the attitudes they held (Table 4).

Table 4
Model Comparison of CFA Models of Moral Outcomes between the American (N=250) and the Chinese Urban Cohorts (N=111)

<table>
<thead>
<tr>
<th>Model comparison</th>
<th>Factor loadings</th>
<th>Error variances</th>
<th>$\triangle \chi^2$</th>
<th>$\triangle df$</th>
<th>$\triangle \chi^2_1$</th>
<th>$\triangle df_1$</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC 1</td>
<td>E</td>
<td>E</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MC 2</td>
<td>E</td>
<td>U</td>
<td>49.82*</td>
<td>6</td>
<td>94.07*</td>
<td>10</td>
</tr>
<tr>
<td>MC 3</td>
<td>U</td>
<td>E</td>
<td>93.91*</td>
<td>10</td>
<td>49.98*</td>
<td>6</td>
</tr>
<tr>
<td>MC 4</td>
<td>U</td>
<td>U</td>
<td>143.89*</td>
<td>16</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note:
1. MC 1= Type of model comparison 1, MC 2= Type of model comparison 2, MC 3= Type of model comparison 3, MC 4= Type of model comparison 4.
2. E=Equal: set invariant path for two models.
3. U=Unequal: set variant paths for two models.
4. $\triangle \chi^2$: indicates decrease in Chi-square from MC1 to other type of model comparison.
5. $\triangle df$: indicates difference in degree of freedom between MC1 and other type of model comparison.
6. $\triangle \chi^2_1$: indicates decrease in Chi-square of MC4 from MC2 or MC3.
7. $\triangle df_1$: indicates difference in degree of freedom between MC4 and MC2 or MC3.
8. $\chi^2_{0.05}$=26.296, $df=16$; $\chi^2_{0.05}$=12.592, $df=6$; $\chi^2_{0.05}$=18.307, $df=10$ (according to $\chi^2$ table\textsuperscript{15}).
9. *: indicates a significant change between two types of model comparison.

Comparison on relationships among Confucian self, moral behavioral tendencies, and attitudes toward behavioral outcomes. Combining the results of the structural relationships among the Confucian self, behavioral tendencies, and attitudes toward behavioral outcomes for the American group (Model 19) and the Chinese urban group (Model 34), it was interesting that the Confucian self was found to be significant in predicting behavioral tendencies, $T=1.98$, and attitudes toward behavioral conducts, $T=3.12$, $p<.05$, for American cohort, but not for the Chinese urban cohort. Also, the attitudes significantly accounted for behavioral tendencies for the American students, $T=5.70$, $p<.05$, but not for the Chinese urban students.

\textsuperscript{15} $\chi^2$ table: See the Appendix H.
Comparison on the relationships among moral judgment, moral behavioral tendencies, and attitudes toward behavioral outcomes. The results of the model comparison found that the effect of moral judgment was not significant in predicting either behavioral tendencies or attitudes toward behavioral outcomes for both the American group (Model 23) and the Chinese urban group (Model 36). The difference between these two samples resided that attitudes toward behavioral conducts significantly predicted behavioral tendencies for the American students, $T=8.27$, $p<.05$, but not for the Chinese urban cohort.

Comparison on the relationships among the Confucian self, moral judgment, moral behavioral tendencies, and attitudes toward behavioral outcomes. The structural relationships among the Confucian self, moral judgment, and moral behavioral tendencies, and attitudes toward behavioral outcomes were compared between the American cohort (Model 28) and the Chinese urban cohort (Model 38). Consistent with what had been found above, the Chinese urban behavioral tendencies and their attitudes toward conducts were not significantly accounted by either Confucian self or moral judgment. Their attitudes toward behavioral outcomes failed to explain their behavioral tendencies as well. On the other hand, behavioral tendencies of the American cohort could be explained by the Confucian self, $T=3.25$ and attitudes toward behavioral conducts, $T=4.27$. The American students’ attitudes toward behavioral outcomes was significantly explained by moral judgment, $T=-2.51$ and the Confucian self, $T=7.64$, $p<.05$. In an unexpected finding, the Confucian self had a very slight effect on behavioral tendencies or attitudes toward behavioral outcomes for the modern Chinese urban students, but it did largely contribute to moral behavioral outcomes for the American students.
CHAPTER FIVE
DISCUSSION

The purpose of this study was to describe and test the validity of the Confucian self-scale, by searching for evidence of relationships among the Confucian self of *ren*, moral judgment and moral behavioral tendencies and attitudes toward behavioral outcome. Specially, this study provides evidence of the Confucian self-development in terms of cross-cultural comparison and regional difference. Overall, this study reveals that the Confucian self is perceived as one unit, rather than the twofold one predicted by the literature. Preliminary evidence lends support for the expected role of the Confucian self in the constructions of moral behavior. Plausible explanation of these findings and reflection on this study are discussed in this chapter. According to the results stated in Chapter Four, this chapter is organized into three sections, including cross-cultural differences, regional differences, predictive relationships among the variables of interest. Implication, limitation, and future work are discussed as well.

**Section One: Cross-Cultural Differences**

**Confucian self.** As stated earlier, findings revealed that both the contemporary Chinese and the American students failed to distinguish breadth of the self and depth of the self, as hypothesized in this study. Both Chinese and the American students perceived the Confucian self as one unit, rather than the twofold one as defined in the literature. However, the Chinese students were found to be more capable of distinguishing the differences among sub-dimensions (indicators in the CFA model) of
the Confucian self. The results indicated the Confucian self-measure developed in this study partially describes Confucian self-development in terms of ren with the present data set. It is important to note that, statistically, both the Chinese and the American students significantly identified the relationship between each indicator and the latent construct of the Confucian self (Table 11). Put another way, the latent factor of the Confucian self significantly accounted for the variances in the each indicator of the Confucian self, for both the two samples, respectively. Thus, the Confucian self-measure can be considered to equally describe self-development for the contemporary young people across cultures.

Supposedly, life in different countries symbolizes distinct cultural histories, varied ways to perceive the social structure of human understanding of the social world and to define the self. One may ask why the American students perceived the Confucian self in a similar way as did the contemporary Chinese students. More specifically, how does the concept of the Confucian self—a collectivism-based notion that entails moral principles of interdependence among human beings—equally capture the psychological construct of moral development among the contemporary Chinese (collectivism-oriented) and the Americans, who are considered to be individualism-oriented? Is the human nature of goodness in Confucian thoughts compatible with human nature of freedom, autonomy, and human dignity, as defined in the Western ethical system? These questions are intricate and extensive to elucidate with the present data set. This is because the present study measured students’ responses to a self-reported survey on their perception and evaluation of the self in terms of the Confucian way, which may not provide sufficient evidence to reveal the actual courses of the Confucian self-development and fundamental causes for similarities and discrepancies across cultural settings. In fact, Confucius offered a
general answer in 2500 years ago. He said: “Human beings are similar in their natural
tendencies (xing, 性), but vary greatly by virtue of their habits” (Analects, 17.2, Ames
& Rosemont, 1998, pp. 203). That is, all human beings share similarity in their natural
tendencies (nature of essential goodness, or ren, as stated in Chapter Two), but they
differ from each other due to the distinct environment or social contexts they live and
moral effort (self-effort) they exert. Accordingly, tenable explanations are explored
and twofold interpretation is discussed in terms of the similarities in the perceptions of
the Confucian self as one unit and the differences in making distinctions of
relationships among dimensions of the Confucian self between the two samples,
which may help moral researchers to understand Confucian self-development within
diverse cultures.

**Similarities.** The results showed that the Chinese students did not differ from the
American students in perceiving the Confucian self in terms of one unit. It appeared
as if the results contradict to theories that illustrate cross-cultural differences of the
self-conceptions and distinct focuses within the two ethical systems. Theoretically,
Confucian thoughts view that all human beings are basically similar in their essential
nature of goodness, called “germination” or “seeds” of morality and characterized as
“ren” (humanity), which is considered as a shared and vitally fundamental condition
of all human beings (Ames & Rosemont, 1998). Confucians believe that “germination”
of morality dwells in each human being and it is the manifestation of moral
universality. Although Confucius rarely mentioned characteristics of human beings
who are alien to the Chinese natives, there is a reason to consider that the moral
universality of ren enables one to resonate with others in terms of their shared inner
experience of humanity (Tu, 1985), regardless of nationality, ethnicity, religion, and

sex. In this sense, it is not striking that both the Chinese and the Americans identified self in a similar way. Such findings seemed to confirm the Confucian thoughts that moral goodness is not simply the potential innate in human beings, but also a “universally experienced reality” (Tu, 1985, pp.70). No matter how our human social environment varies; it does not deny us the same reality of universality as moral being. Such a qualitatively moral feature gives prominence to the value of human beings, which is the unique quality that allows human beings to be different from the same “acts” in other animals (Tu, 1985). By contrast, in Western perspective, the uniquely moral quality of human beings that is different from animals resides in human rationality and pursuit of internal values of human liberty, human right, autonomy, which are complying with the human nature (Dien, 1982). To bridge the gap between ordinary human existence and moral ideal of being a sage in Confucian ethics, enlightenment of human inner moral “germination” becomes important. Confucians deem it is only through concrete and practical everyday experience and critical self-examination that could allow one’s “germination” of morality brought to fruition.

On the other hand, “seeds” of morality inherent in human nature may not necessitate one’s later Confucian self-development; as Confucius believed, human beings vary greatly relying on socially developmental contexts. It has been taken for granted that the contemporary Chinese are inherited Confucian thoughts and should have developed a more orthodox sense of Confucian self (Lin & Ho, 2009), and Chinese people are believed to have a higher-level sense of the Confucian self than Americans. Interestingly, the results, however, indicated that the Chinese and the American students had a similar perception of Confucian self, although they live in different social contexts. The question raised here is whether or not the contemporary Chinese social environment is similar to the American milieu, which ensures the
similar degree of sense of Confucian self across cultures. Before drawing a safe conclusion, special conditions that endorse Confucian self-development need to be considered. Such conditions include Confucian developmental context and moral effort, which jointly enlighten and cultivate “seeds” of morality and contribute to the Confucian self-development. The assumption that Chinese students have a higher level of sense of Confucian self than Americans may be based on the special conditions which are favorable for Confucian self-development. Given that contemporary Chinese environment does not provide uniquely developmental context that allows the Confucian self to develop and people in China lack self-effort that contributes to moral improvement, the view that considers Chinese students having a higher sense of Confucian self-identity than Westerners will be challenged.

*Developmental context.* Confucian self is a way of identity that psychologically connects a Chinese individual to the Chinese culture. The development of moral identity is usually tied to developmental contexts (Hart, 2005) and associated with an individual’s experience and interaction with culture (Wan & Chew, 2013). As stated earlier, all parts of life in the traditional Chinese society, including family, school, community, were saturated in Confucian ethics (Dien 1982; Fairbank, 1980). In other words, such developmental contexts that one attached in the past allowed well-developed Confucian self. Currently, however, contemporary favorable contexts of Confucian ethics seem sparse. Given American society lacks a commitment to Confucian ethics or Confucian influence, it is important to address what may have happened to the contemporary Chinese society in which developmental environment for Confucian self-development is needed. Increasingly, scholars believed that modernization (internal) and globalization (external) in China have greatly
undermined the ethical culture of China. For modernization, social environment in China today has become unfavorable for preserving Confucian tradition (Lin & Ho, 2009) due to the Cultural Revolution (a social-political movement that took place around 1970s, characterized by military rules, reconstructing the education system, and fighting against traditional cultures) and various societal transformation on such as economics and politics (e.g., Li, 2008; Lin & Ho, 2009; Yao, 2000). East-Asian form of modernization is regarded as the combination of the abandon of traditional culture and westernization (Song, 2002). Confucian ethics seems to lose its political and social guardians in a large environment. Modern life styles, such as impersonal virtual communication and expansion of social media, and technological information apparently have become potential threats to the persistence of Confucian Tao and its ethics (Li, 2008; Lin & Ho, 2009). Typical effects of modern life modes are obvious. For instance, it is evident that intergenerational relationship, such as filial piety (the most fundamental family relationship in traditional Chinese society) and adherence to the family are found to attenuate in the last two decades among the young people (e.g., Yue & Ng, 1999; Zhan, 2004). Meanwhile, Zane and Yeh’s study (2002) reported that filial piety can be found in Westerners through response to survey. However, King and McInerney (2014) considered that filial piety is a less essential notion in the Western psychological and ethical domains. Consistently, Cheng and Chan (2006) pointed out that the perceptions of filial piety between East and West are different. They further explained that filial piety in the West means physical care of the parents when they are in need, whereas in the East, filial responsibility conveys the devotion that the children have to their parents with esteemed love, regardless of certain circumstances.

For globalization, it brings different cultural elements into China, resulting in cultural changes. Globalization, to a large extent, is considered as westernization (Tu,
Within such a change, young Chinese people are found to increase self-enhancement values (Egri & Ralston, 2004). Taiwan scholars (Lu & Yang, 2006, pp. 169) indicated that a traditional-modern bicultural self portrays the contemporary Taiwan Chinese identity, which integrates social-oriented self characterized with “interdependent and ensembled self” and individual-oriented self characterized with “independent and autonomous self”. Lu’s study (2005) provided evident support for the existence of bicultural construct of Chinese self. In other words, modernization and globalization may influence Chinese people’s perception of self-identity, when they are under constant modern pressure and social challenge.

Another important developmental context is education, which is not limited to school community, but also includes family and social community. If cultures are characterized by and maintained simply through the clothing one dresses, the food one eats, or the language one speaks, the cultures will lose their own essential soul and spirits. Education as an important carrier affords to pass fundamental cultural significance underlying daily activities to next generations. Take school education for example. Power’s (2004) model of the moral self highlights the significance of school environment that plays a role of reminding commitment to moral ideal and rules. The key of such social influence resides in that people get immersed by “social networks that have moral goals” (Colby & Damon, 1992). For Confucian teaching, traditionally, it contains social and moral dimensions (Li, 2002), which places emphasis on the authentic learning that aims to assist human beings to discover their nature of goodness and develop the self for growth of inner strength as ren characterized. However, such a traditional ethics-centered education model has been replaced by a contemporary knowledge-centered education model with foci on learning goal and teaching methods, which lay stress on external acquisition of cognitive knowledge,
such as structure of scientific knowledge, and skills, such as writing, verbal, and problem-solving skills (Sawye, 2006). The knowledge-centered education model can be found in both cultures (Foss & Kleinsasser, 1996; Glogoff, 2005; Yang, et al., 2007). If one’s attention and energy center on the external, human internal resource of humanity will be dispelled (Tu, 1985). Previous findings indicated that the contemporary Chinese youngsters appear to think and to act in very different ways from their older generations on ethical and cultural characteristics of Confucian thoughts, such as loyalty, responsibility for taking care of parents, and self-reflection (e.g., Cheng, & Chan, 2006; Fuligni & Zhang, 2008; Lin & Ho, 2009; Yue & Ng, 1999). Without Confucian education, it becomes difficult for Chinese people to be unique from Westerners when it comes to cultural identity. Accordingly, it is not surprising that the Chinese students without Confucian education did not make a distinction between broadening process and deepening process of the self and had a similar perception of Confucian self as one unit as did their American peers, although they were considered to be more likely to access to Confucian teaching.

Although no identifiable factors could be detected for similarities in developmental contexts between Chinese society and American society in the present study, we may consider that both modern Chinese and American societies lack strong Confucian influence on moral development. Especially, Chinese milieu becomes less favorable for maintaining Confucian ethics. If both countries are influenced by current mainstream culture with Western characteristics, similar cultural input may notably bring about similar output for the two cross-cultural samples, which means no matter Chinese histories and traditional cultures differ from a Western country; self-identities of the contemporary Chinese and Americans are not distinct culturally.
Moral effort. If developmental context provides environment for one to develop with inherent “seeds” of morality, moral effort is a role that allows moral “seeds” to grow within the developmental context and realizes the moral potential. Moral effort refers to self-effort and active participation with moral consciousness that contributes to self-cultivation (Confucian self-development) in terms of ren. Confucius’ faith in perfectibility of human nature relies on self-efforts, which invokes the nature of goodness in human beings (Tu, 1993). To a large extent, the height of moral maturity depends on the degree of moral effort. If explained in a Western way, moral effort can be considered as a self-regulatory mechanism that consists of three steps: moral consciousness, moral will—the most important moral desire within oneself that is effective in bringing about ethical conducts (Blasi, 2005), and moral action. As stated in Chapter Two, the moral object is one’s self in Confucian ethics, whereas the moral object is moral issue in Western ethics. Moral effort serves as a role that calls up self-awareness and self-examination of one’s mistakes (analogical to moral consciousness in moral issue) and fixes one’s developmental way during the process of moral development (Tu, 1984b) (analogical to moral action on a right choice), through commitment to moral ideal consistent with Confucian thoughts (Tweed & Lehman, 2002) (analogical to moral will that directs one’s behavior to be consistent with moral self). It entails a process of self-development that is dynamic, continuous, reflective, and receptive (Tu, 1984b).

However, this section does not attempt to expand dimensions of the moral effort with details, but to underscore the role of moral effort in the Confucian self-development. Since there are very few empirical studies addressing the influence of moral effort on moral development, knowledge remains limited with regard to whether or not the Chinese students exerted an equal degree of moral effort on their
Confucian self-development (at least moral self-development) as did the American students. Also, there were no clear clues available to identify the effects of moral efforts on Confucian self-development with the present data results. If moral effort is found to contribute to Confucian self-development in the future work, this would have serious implications. This would highlight the importance of individuals’ self-effort with moral consciousness, indicating that internal strength and moral willingness contribute to perfect the self in terms of the Confucian way. It is imperative to do so as the product of moral effort makes it possible that moral transformation from a small self to a big self and strengthens the self-regulatory mechanism of being moral.

On the other hand, the effects of developmental context and moral effort on Confucian self-development were beyond research interest in this study, thus further exploration is needed. If the combination of developmental context and moral effort are found to be significant predictors of sense of self-identity in the Confucian way, it could provide better understanding of Confucian self-development. The more potential factors are identified, the more precisely moral psychologists can identify the course of Confucian self-development and improve human moral quality.

**Differences.** Traditionally, cross-cultural studies habitually employ a dichotomous approach (e.g., independent versus interdependent, or individualism versus collectivism) to explain plausible causes for the Western and non-Western discrepancies. These studies mainly focus on the comparisons between individualistically-oriented characteristics, such as human dignity, autonomy, and freedom, and socially-oriented characteristics, such as concerns for others, obligation, and group interest. Lam’s study (1997) proposed Chinese adolescents’ concept of the self is relational-network-based, which does not support Western model of
“autonomous self”. It was evident that Taiwan Chinese perceive the self in a way that is more associated with feelings and thoughts of others than do the Americans (Page & Cheng, 1992). Similarly, East Asians (Japan and Korea) perceive a more context-relational self, whereas the Westerners (in Australia, Germany, and UK) identified a more context-invariant self which is clear and constant across contexts, demonstrating the cross-cultural variability of the context-sensitive self exists (Kashima et al., 2004). To some extent, concern for others becomes a part of identification of the self when Chinese perceive and feel about themselves (Page & Cheng, 1992). Unfortunately, such a view on cross-cultural difference is not supported by the present study.

Although a similar notion of the Confucian self was perceived by the contemporary Chinese and the American students, differences between two cultures were noted. The Chinese participants were more capable than the Americans of distinguishing the differences among observed variables of the Confucian self (such as family, community, and body). It is plausible, although Chinese young people's scores on the measure may not completely reflect all aspects of Confucian ethics, it is inevitable that they are directly or indirectly influenced by Confucian ethics that remain either through the efforts of older generations or more generally within the Confucian cultural atmosphere. By contrast, American participants are limited to exposure to the Confucian contexts or Confucian thoughts. Without the appropriate influence of Confucian cultural environment, it may become difficult for Westerners to understand simple activities such as eating and walking, which in fact are laden with moral significance for self-development (Tu, 1985). For instance, a comparative study in New Zealand found that Chinese are stronger in endorsing Confucian ethics, such as filial responsibility, financial support for family than Europeans, (Ng, Loong,
Liu, & Weatherall, 2000), mirroring a Confucian deep-rooted sense of traditional family obligation that is passed among Chinese intergeneration, even though Chinese have immigrated to a Western country. For this reason, it is reasonable that the contemporary Chinese are more sensitive than their American counterparts to the detailed differences of the scopes of the self.

On the other hand, living in China does not completely represent one’s sense of Confucian self or identity with Confucian characteristics. Yeh and Hwang (2000) indicated people within the same culture may vary in self-perceptions from an independent to an interdependent self, and people from different cultures may develop a similar perception of either the independent or the interdependent self. As discussed earlier, Lu’s (2005) found a bicultural-identity is perceived among Taiwan Chinese, who integrate westernization and traditional Chinese culture as defining self-identity. It is also evident that Chinese college students’ self-identity changes with English learning (Gao, et al., 2005). In a specific way, English-major students are more likely than non-English-major students to experience cultural identity changes in terms of westernization and rejecting some aspects of native Chinese cultures. It seems that exposure to a Western culture via learning language influence formation of one’s self-identity. Accordingly, it should be careful when one selects cross-cultural samples simply by categorizing them in terms of where they live. Thus generalization of perception of the Confucian self across culture settings needs further examination.

It is noteworthy that unlike other moral measure, such as DIT-2 (captures moral principles such as human right, freedom, and elimination of hunger), the Confucian self-measure attempts to capture the self-construal in terms of one’s scope of breadth of the self and depth of the self. The scale lacks characteristics with regard to individual attributes, such as value, personality, or attitudes, and thus may not endorse
individualistic dimensions of the self. Yet it reflects one’s relationships with others, society, and the world, and self-knowledge as a human being. Thus, it is unclear whether or not the Confucian self perceived by the two samples is susceptible to change when individualism or personal interest becomes a challenge.

**Moral judgment.** Addressing the cross-cultural difference in moral reasoning development, the Chinese students received higher postconventional scores than the American students. The results indicated that postconventional scores of the Chinese group were significantly higher than the American group, whereas Personal Interest scores of the American group were significantly higher than the Chinese group. Two decades ago, Dien (1982) cast doubt on the emic elements (culture-specific) of a Western perspective on moral judgment development that could reflect the Chinese conceptions of morality. She insisted that the Chinese and the Americans differ in developmental trajectories of moral thinking because the complex systems of human networks, rules of exchange, social available resources, and modes of conflict-solution vary between the Chinese and the American cultures. Some comparative studies supported her assumption. For instance, it was evident that the American students received higher P scores than the students in Taiwan (e.g., Ho & Lin, 2008) and Hong Kong (Ma & Cheung, 1996). It was suggested that the Chinese students are less likely than the American students to depend upon idealistic related considerations in the moral judgment (Whitecomb, et al., 1998); instead, they are more likely to be concerned with self-interest (Lin, 1999). This study, however, seemed not to support her assumption. The results echoed some earlier findings (Chuang, 2008; Venezia, 2005) that showed Taiwan Chinese students reported higher P scores than American students.
Distinction between collectivism and individualism is traditionally used to interpret cross-cultural variation on moral judgment scores. For instance, collectivism orientation allows Chinese people to prioritize the right of group, and hence stability of social norms is upheld (Dien, 1982; Ma, 1988), whereas individualism orientation values individual’s right, which is under protection at any circumstance in Western society (Chow & Ding, 2002). However, the present results or earlier findings may not be sufficient enough to conclude whether a Western tool (e.g., DIT-2) successfully applies to the Chinese context. Other factors need to be accounted for consideration.

First, one needs to be alert that the inconsistent results in cross-cultural studies may be caused due to the translation. Since little knowledge was provided to illustrate the procedures of translation in the previous cross-cultural studies, one may question whether the DIT equivalently simulates the cross-cultural samples to respond to given moral situation. If cross-cultural cohorts differently perceive the survey, the translation validation of the measure may be challenged.

Second, cross-cultural differences on DIT in this study may be caused by sample selection in the two nations. Chinese samples were pooled from 9 universities across China whereas American sample was only recruited in one university in the South. An earlier study found that southern American students’ DIT scores were much lower than national norms (U.S.), indicating low DIT scores that the American students received may be due to regional environment (Jiang & Thoma, 2012). Thus, the Chinese samples may be more diverse and their scores, to some extent, could be representative, whereas the American sample may not represent the dominant national trend. Also, simply comparing postconventional thinking scores by where one locates may not be adequate enough to understand the role of culture in human moral judgment development. It would be of interest for future work to conduct related
study with experimental manipulation design that figures out the impact of culture on moral judgment development.

It is worth noting that Thoma and Bebeau’s (2008) study of analysis regarding twenty years of Defining Issues Test Data within the United States found that DIT scores declined across every ten years from 1980s to 2000s. Bebeau (2008) explained that declining in moral judgment might be because of increased emphasis on the self. It appeared that moral judgment is driven by more personal consideration rather than social or universal-orientated consideration. In addition, both samples had higher Personal Interest scores (Table 13), compared to DIT-2 national norms (Bebeau & Thoma, 2003). Increasing preference in Personal Interest schema may send a signal that as long as rational clarification is provided to defend personal interest, it is inevitably that self-centered thinking and action choice may become normal phenomena.

For gender difference, although both the American and the Chinese females received higher P scores and N2 scores than their male counterparts. One possible explanation suggests that knowledge attainment is stressed in traditional education, and females who work hard on their academic performance seem to have higher moral scores in moral judgment. Another plausible reason explains that DIT is based on paper-pencil measure and is sensitive to reading and verbal skills, and therefore females’ higher moral scores may result from their verbal superiority measurement. In other words, gender superiority in reading allows females to receive higher DIT scores (Thoma, 1986). However, gender contributes little amount of difference to moral judgment development, which is consistent with early studies (e.g., Bebeau & Brabeck, 1989; Boldizar, et al., 1989; Thoma, 1986; Walker, 2006). That is, females and males have very similar patterns in moral judgment.
Moral behavioral tendencies and attitudes toward behavioral outcomes.

Chinese students reported higher unethical behavioral tendency scores on cheating and stealing than American students; meanwhile, American students reported higher unethical behavioral tendency scores on social cooperation and aggressive behavior. Furthermore, Chinese students appeared to hold more acceptable attitudes toward misconducts than their American peers. Confirmatory factor analysis further indicated these two samples perceived moral behavioral tendencies and attitudes toward unethical behavioral outcomes in different ways (Figure 10, Figure 12, & Table 22).

Some of the results echoed previous findings. For instance, Rawwas, Al-Khatib and Vitell (2004) found that Chinese business students were more likely than American students to engage in academically delinquent behavior, such as cheating. In addition, contemporary Chinese managers are also found to be more interest-oriented and less socially responsible than the U.S. managers (Shafer, Fukukawa, & Lee, 2007), and Chinese youth were demonstrated to be more tolerant than Americans with questionable online behavior (e.g., Jackson, et al., 2008).

In fact, it is complex to explain moral behavioral tendencies and attitudes toward unethical behavioral outcomes across cultures. To some extent, moral behavioral tendencies and attitudes toward behavioral outcomes are reciprocal, and there are several factors that may culturally contribute to outcome variables. One plausible and direct cause that affects different perceptions of the significance of morality and social responsibility between these two cross-cultural samples is a legal system. A well-established system in the U.S. has higher standards of ethics and social responsibility, and provides behavioral standards and limits, which are supposed to discourage unethical or unfavorable behavior (Shafer, Fukukawa, & Lee, 2007). In such a society, the Americans behave appropriately and maintain the way that society
functions. By contrast, since The Cultural Revolution in the 1960s-1970s, Chinese traditional ethical standards (e.g., Confucian ethics) have been devalued and even undermined (e.g., Song, 2002; Yao, 2000). On the other hand, the contemporary Chinese legal environment has been portrayed as a poorly developed system and has unclear behavior standards (Wong & Tam, 2000). Chinese people seem to become ambiguous about the boundaries between responsibilities and limits. Furthermore, people in the transitional period of China are exposed to a gallery of values, thoughts, ideas, and concepts, in which they wander and are never sure their choices will benefit their moral development. And worse, economic expansion allows them to prioritize individual interest over other considerations, resulting in a decline in ethical standards of behavior (Shafer, Fukukawa, & Lee, 2007). At this point, improper behavior and attitude may be rationalized at the expense of morality for the Chinese sample, whereas appropriate behavior and attitude are upheld by the American sample in a Western society.

Another possible cause for the cross-cultural difference on behavioral tendencies and attitudes toward behavioral outcomes may be attributable to a level of moral awareness, which is twofold. One aspect is social participation, which refers to the degree of social activities (formal or informal) that a person engages in society (Lindström, Hanson, & Östergren, 2001). The level of moral awareness may vary relying on different levels of social participation, which may indirectly affect moral behavioral tendencies and the formation of attitudes toward behavioral outcomes. Most Chinese students are well protected by schools and family, and they simply focus on academic learning in the ivory tower (Chen, Dong, & Zhou, 1997). To some extent, they are “deprived” of various opportunities to participate in the realistic world that supplies diverse moral lessons. Accordingly, the young Chinese students may not
authentically perceive the real world beyond their academic environment and seem less aware of their behavior and attitude, which may affect others. By contrast, the American students have more opportunities to engage in social activities. For instance, Cicognani and his colleagues (2008) found that American students have higher social involvement than Italian and Iranian students, such as attending public meeting, sports events, religious participation, and voluntary service, which in turn, allows them to shape their responsible behavior and form appropriate attitude toward behavior. For this reason, the Americans are more likely to view themselves as a part of a society, which raises their consciousness when they are involved in a social system.

Furthermore, Jackson, et al. (2008) found that Chinese students report more acceptability of questionable online behaviors than did U.S. students. The internet environment and its behavior mode weaken Chinese college students’ self-awareness of morality and lower their standard of morality (Feng, 2008). This is because lack of stress and responsibility that the online experience provides, like real life, the Chinese students reported that they can do whatever they like but without taking responsibility and they do not need to take it seriously (Golub, & Lingley, 2008). Absence of an effective-legal system further facilitates delinquent behavior. At this point, the American students probably had a higher level of moral awareness than their Chinese counterparts.

In addition, another aspect of moral awareness is the ability to perceive or foresee consequences of unethical behavior has been demonstrated to influence an individual’s unethical behavior (Chow & Ding, 2002) and formation of attitude toward behavior (Leonard & Cronan, 2005). For Americans, the legal system provides knowledge of behavior standards and details of consequences of unethical behavior, through which American students are able to tell the seriousness of unethical behavior
if they engage in. Contrarily, for Chinese, they remain unclear about knowledge of law and behavioral standards. Additionally, with limited social involvement, they may be not conscious of the seriousness of inappropriate behavioral outcomes as do their American peers. Also, for Western people, religious teaching in community plays a crucial role in guiding and assisting people to behave morally (Rawwas, Al-Khatib, & Vitell, 2004), whereas such teaching is absent in China. It is worth noting that one’s personal value or belief system is considered to affect their attitude (Bommer et al., 1987) and may be important when one reflects the power of personal spiritual source on our behavioral outcome and attitude formation. Taken together, Americans are more likely than Chinese to be aware of the significance of moral obligation and develop a sense of ethical awareness. Therefore the American students exhibit more self-regulatory behavior and proper attitude than the Chinese students.

Section Two: Regional Differences

The findings indicated that the Confucian self was differently perceived between the Chinese rural-town and the urban cohorts. Moral behavioral tendencies and attitudes toward behavioral outcomes were equally perceived, with distinct correlations among the indicators between the two groups.

Confucian self. The Confucian self of the rural-town cohort accounted more for the variability of the family than for the urban cohort. On the other hands, the urban cohort was more capable of distinguishing differences among indictors of Confucian self than the rural-town cohort.

Undeniably, as stated in the preceding discussion, Chinese tradition has been heavily weakened, and a variety of traditional living styles has been challenged and
even under threat to survive by corruption of Western cultures. Some recent research (e.g., Fuligni & Zhang, 2004, Chen & Chiu, 2010) found that people in modern urban areas are more westernized and have a weaker sense of traditional commitment (e.g., family obligation) than those people in rural areas. They also indicated that traditional Chinese cultures today are better preserved in the rural area than the urban area. Different degrees of westernization, to some extent, may represent the different magnitudes of commitment to the tradition across regions. However, the results did not support the assumption that maintaining the traditional life mode ensures the higher sensitivity among the Chinese rural-town cohort than their urban counterparts to the differences among sub-dimensions of the Confucian self in the present study.

In addition to westernization, urbanization may be another factor that helps to interpret. One recent article in New York Times (Johnson, 2014) indicates that modern urbanization has obviously corroded the traditional cultures and it has become a threat to the Confucian ethics in China (Yao, 2000). A massive wave of urbanization compels most people in the urban areas to consider Confucianism as an outdated and feudal obstacle for human development. Urbanities appears to be more likely to identify themselves as modern people with Western characteristics, such as freedom, democracy, and human right, rather than Confucian characteristics, such as filial piety. By contrast, it may be less likely for the Chinese rural people to get connected with the world outside via such as internet or Television and thus they may maintain relatively more traditional ethical thoughts and a living pattern. Such a view has been endorsed by Chen’s study (2007), which indicated that Chinese rural college students exhibit more positive perception of moral self (e.g., honesty) than urban cohort. The results of this research showed similar patterns. The results found that the family was more important to Confucian self-identity for the rural-town group than the urban
group. On the other hand, neither main effects for region nor significant differences between correlations among indicators of the Confucian self were found between the rural-town and the urban cohort. Mere differences in model comparison were not sufficient enough to indicate that the Chinese rural-town cohort differs from the urban cohort in perceiving the sense of Confucian self. It is possible that most respondents for the urban and rural areas are considered as transitional in self-identity (Lee, et al., 2010), as Lu and Yang (2006) indicated a bicultural self is perceived among the contemporary Chinese society. Lee, et al. (2010) further indicated that although Taiwan urban youths’ self-identity are more individualistic while rural youths are significantly more traditionally social-oriented, not all rural youths are collectivistic and a large portion of young adolescents still favor traditional values. In other words, the difference in self-identity does not solely rely on the area that one lives. Thus, it seems assertive if one simply concludes that modern urbanization and westernization draw a clear boundary which limits rural people to understand urban people’s modern life, or restricts urban people to appreciate a traditional way of living and social interaction in rural area.

**Moral judgment.** The results indicated that the Chinese urban students preferred a postconventional thinking schema whereas the Chinese rural-town students did not exhibit an obvious preference of moral schema on the DIT. This finding was partially consistent with early investigation (e.g., Chen & Chiu, 2007; Zhang, Zheng, & Wang, 2003), which found that rural people are less westernized than urban people, and they are more likely to maintain social norms. Zhang, Zheng, and Wang (2003) indicated that economic and social transformation in China provide urbanities with more accesses to social information (internet, TV, news), which allows them to be more
exposed to diverse ideas of living, values, attitudes, supporting individual freedom and individual modernization. By contrast, it is evident that Chinese rural people are less likely than their urban peers to support freedom and autonomy in decision-making (e.g., Helwig, et al., 2011; Lahat, et al., 2009), but tend to favor traditional strategies to solve with conflicts and uphold traditional values, attitudes, and views (Zhang, Zheng, & Wang, 2003). At this point, the results are somewhat inconsistent with previous findings, which indicated moral judgment varied by settings (rural and urban regions) (Lahat, et al., 2009).

Addressing gender difference in moral judgment, the results were consistent with the previous findings on moral judgment in Western research (e.g., Bebeau & Brabeck, 1989; Thoma, 1986; Walker, 2006), indicating that females and males had very similar patterns in moral judgment in China. Hence, gender contributes little amount of difference to moral judgment development across regions in China.

**Moral behavioral tendencies and attitudes toward behavioral outcomes.** Both the Chinese rural-town and urban groups perceived moral behavioral tendencies and attitudes toward misconducts at similar degrees. The difference between these two groups resided in different correlations among the indicators of the latent variables of moral behavioral tendencies and attitudes toward behavioral outcomes (Figure 19 & Figure 20). For instance, the Chinese rural-town cohort believed that cheating was correlated with self-serving purpose activity, whereas the Chinese urban cohort did not.

Overall, it seems that the large milieu in China was similarly perceived within the Chinese subgroups, which may bring about similar moral behavioral tendencies and form attitudes toward behavioral outcomes. Evidence demonstrated that contemporary
Chinese students are affected by a variety of ideas and attitudes of such as personal hedonism and personal interest (e.g., high academic score means future success). For instance, Chinese undergraduates’ cheating behavior is facilitated by irresponsible individuals, media, and profit-oriented social organizations (Wan & Cao, 2002). The spread of cheating, self-serving oriented activity are gradually accepted as normal phenomena. When these youngsters are invoked to focus on personal-interest, they may justify their behavior at the expense of being moral, resulting in increasing possibility to engage in risky activity. It should be caution that they may extend irresponsible behavior to their future life.

On the other hand, regional difference on behavioral tendencies and attitudes toward behavioral outcomes still remained. The Chinese urban students were capable than their rural-town peers of discriminating the distinctions in sub-dimensions among moral behavioral tendencies and attitudes toward behavioral consequences. Redfern and Crawford (2004) indicated that such a difference may not necessarily be associated with the degree of westernization but rather is due to more local influences. For instance, urbanities are more likely to be exposed to community education, public resources, social participation, and access to a variety of social information, which may provide ethical knowledge for them to differentiate a moral behavior and shape their attitude toward such a behavior accordingly. By contrast, for rural areas, most rural parents have been seeking lives in the urban areas for the sake of financial source for supporting their family since two decades ago. Absence of family and community education may give rise to a lower level of moral consciousness for the rural-town cohort. There is evidence that the lower level of moral consciousness and lack of public moral education because of limited resource and social information result in less sufficient ability to detect differences among moral behaviors for the
rural people (Cai, 2010). Distribution of social resource and accessibility to social information may again draw a line between rural-town and urban cohorts in distinguishing moral behavioral tendencies and attitudes toward behavioral outcomes.

Section Three: Relationships among the Variables of Research

In this section, discussion focuses on the predictive relationships among the variables of the Confucian self, moral judgment, and moral behavioral tendencies and attitudes toward behavioral outcomes across cultural settings.

Cross-cultural comparison.

The results found that a consistent with Confucian self indicated a higher probability of engagement in moral behavior activity and a less acceptable attitude toward unethical behavioral outcome for both the Chinese and the American students. More specifically, the results indicated that the Confucian self explains equal amounts of variability in attitudes toward behavioral outcomes, and less tolerable attitudes toward unethically behavioral conducts indicated a higher possibility of moral behavioral tendencies for both cohorts. The cross-cultural differences were that the American groups showed stronger predictive relationships than the Chinese group, including relationship between the Confucian self and moral behavioral tendencies, and relationship between attitudes toward behavioral outcomes and moral behavioral tendencies. Moral judgment only showed itself a significant relationship with regard to attitudes toward behavioral outcomes for the American subjects.

Confucian self and moral behavior variables. Before cutting into the roles of the Confucian self in moral behavioral tendencies and attitudes toward behavioral
consequences, there is a need to have a short discussion of Western perspectives on
the role of moral self/moral identity in ethical outcomes. Psychologists of moral self
or moral identity highlight the role of moral self or moral identity in moral behavior
(e.g., Aquino & Reed, 2002; Blasi, 1980, 1984, 2004; Reynolds & Ceranic, 2007).
They believe that moral self or moral identity bridges a gap between moral thinking
and moral action. It is through the desire to uphold self-consistency that moral identity
directly allows one to perform moral behavior (Blasi, 1984, 1995). This is because
moral self or moral identity that allows an individual to maintain his or her moral
coherence. Such a moral congruence can be considered as a moral integrity. These
studies also consider that desire, will, or value explains why moral self is consistent
with moral behavior. The relationship tested between moral self and moral behavior in
Western research is to explore whether a person behaves morally because he/she
wants to be consistent with a sense of moral self, which is of importance to
self-identity as a moral being. The empirical support can be found in earlier studies
(e.g., Aquino & Reed, 2002; Reynolds & Ceranic, 2007).

In Confucian thought, it is meaningless to impose moral standards, moral rules or
moral expectation upon the people (Tu, 1985). Rather, Confucian principles run
through daily practice, regulating simple activities, such as eating, gesture, talking,
and advanced moral activities, such as social cooperation. All social forms of human
interaction are filled with moral implication and serve to illuminate “germination” of
morality (Dull, 2005; Fung, 1983; Li, 2008; Tu, 1985). The relationship between the
Confucian self and moral behavior portrayed in this study attempts to demonstrate
that a person behaves ethically because it is the nature of human beings, serving as an
inner resource, which encourages one to engage in moral activity. Participation in
moral activity is not to please others or merely comply with li or social norms as
expected (Tu, 1985). Instead, it is for the sake of self-transformation into a sage with ren characteristics and allows one to genuinely touch humanity as human beings (Tu, 1985).

The present results indicated that the Confucian self significantly relates to moral behavioral tendencies for both the Chinese and the American samples. Similar evidence found that consciousness of moral behavior is related to perception of filial piety and characteristics of ren among Singapore youth (Thomas, 1990). Theoretically, such a relationship is expected. This is because “Ren is not merely mental, but physical as well” (Ames & Rosemont, 1998, pp. 49). Different from a social-cognitive role of moral judgment (discussed later), or a role of chronic access to moral self-schema in the moral behavior (Narvaez & Lapsley, 2009; Narvaez, et al., 2006), the role of the Confucian self functions in terms of translating Confucian principles into human everyday activity and uncovering self-knowledge underlying the regular activities. Through one’s practice of daily human relatedness under direction of these principles, self-cultivation becomes possible. Engagement in moral activity does not require professional skills or special cognitive ability to achieve moral maturity. The larger part the Confucian self plays, the more likely for an individual to prioritize inner sense of ren over other considerations in daily activity. In this sense, it is possible that the shared and essential human nature that compels self-identity to significantly indicate their behavioral tendencies and attitudes toward behavioral outcomes for both the Chinese and the Americans. One’s maturity in moral sense of ren (humanity) and li (righteousness) brings about an acceptable social well-being (Tu, 1985).

In the Western perspective, scholars (e.g., Haringham, 2004; May, 1996; Musschenga, 2001) believe that moral integrity, which refers to moral quality of a
person who commits to a certain conception of the “self”, acts in an appropriate way to determine the height of moral maturity. The reason that integrity is crucial resides in that “it is connected with the trustworthiness and reliability of people and the predictability of their behavior” (Musschenga, 2001, pp.223). Hardingham (2004) indicates that in order to obtain and preserve one’s integrity, a mutual process is needed to reflect in oneself and interact with others, which enables us to settle our principles in daily activity. A person of moral integrity acts in such a way that is reflective and thoughtful discourse about his or her identity (Hardingham, 2004).

Although no sufficient evidence demonstrates a causal relationship between Confucian self, moral behavioral tendencies, and attitudes toward behavioral outcomes, this study may consider that the Confucian self may be similarly perceived as moral self in the Western perspective. Similar to the role of moral self in Western view (Blasi, 1993, 1995), Confucian self directly impels one to behave morally through constant commitment to ren. When the sense of Confucian self becomes important to one’s identity, it takes precedence over other considerations in regulating one’s behavior and attitude formation. As indicated earlier, when morality becomes central to one’s identity, it privileges in his or her life (Blasi, 1995). This has been empirically confirmed in recent studies (e.g., Aquino & Freeman, 2009; Reynolds & Ceranic, 2007), indicating that the self-importance of moral identity is positively associated with prosocial behavior, such as social sensitivity to the needs of others and donating behavior.

One plausible reason for an important role of the Confucian self in attitudes toward behavioral outcomes is that identity is central to attitude, and “is sufficient to call up the set of attitudes characterizing that identity” (Emler, Renwick, & Malone, 1983, pp.1080). Also, attitude is considered to derive from people’s sense of identity.
(Judd & Krosnick, 1982), and reversely, a person’s self-identity is mirrored in a person’s beliefs, values, and attitudes (Sparks & Shepherd, 1992). For instance, Hayes (1977) found that a high-identity cohort exhibits more ethical and socialized tendencies than a low-identity cohort using measures of moral attitude. A higher self-identity in Confucian way may facilitate ethical sensitivity, which reinforces the relationship between identity and attitude. When one’s identity commits to whom he or she defines, it is possible that his or her evaluation of behavioral outcomes is consistent with those characteristics pertaining to identity.

The relationship between the Confucian self and moral behavioral tendencies for the American cohort was found to be stronger than the Chinese cohort. It seems that the Americans were more morally reliable than their Chinese peers when it comes to congruence of consistency of Confucian self and engagement in the moral activity. Both the Chinese and American equally perceived the Confucian self, yet their behavioral tendencies may vary due to distinct situations, thus resulting in different relationships between the Confucian self and moral behavioral tendencies. Admittedly, Li (2004) indicated that “One Family, One Child” policy in China may facilitate a growth of self-centered conducts and decrease in responsible behavior among young people, which parents would allow to bear. This may weaken the relationship between the sense of moral self and moral behavior (Tan, 2006). For instance, previous findings indicated that single children in a family are more egocentric than children with siblings, and sibling children exhibit more socially cooperative behavior and peer relation than single children (Jiao, et al., 1986). By contrast, Americans were found to be more ethical in behavioral outcomes, such as honesty and social cooperation (Cicognani, et al., 2008). However, Heine (2001) suggested that East Asians’ behavior is more associated with situational information, whereas North Americans’ behavior is
more fairly invariant across situations. For instance, there is evidence that Chinese students are less likely than American students to make attribution to disposition for one’s behavior, yet they are more likely to attribute to situational factors (Morris & Peng, 1994). Interestingly, another consistent finding was that Chinese adults allowed untruthful statement made for the sake of modesty (a characteristic highly valued in Confucian ethics) that is beyond consideration of lying, whereas Canadian viewed such behavior as lying (Fu, et al., 2001). It seems like Chinese and Westerners have different definitions of moral behavior. Nevertheless, the present data set did not allow us to reveal such differences. Accordingly, although the Chinese students have higher Confucian self scores, their sense of Confucian self did not function as strong as that of the Americans.

Moral judgment and moral behavior variables. The relationship examined in this study between moral judgment and moral behavioral tendencies is to understand whether a person behave morally because it is right/wrong to do. Many cognitive-developmental scientists (e.g., Kohlberg, 1969; Rest, 1999a) believe that moral judgment is a crucial role in directing human moral behavior. Moral judgment allows one to tell the right from the wrong in given moral situation and reveals the moral principle underlying one’s decision to act. Specially, Kohlberg & Candee (1984) believe that an action cannot be regarded as moral if it is independent from the individual’s thoughts or judgment about the action. In this study, however, the direct effect of moral judgment on moral behavioral tendencies was slight for both samples. It seems that simply because a person knows what is right and what is wrong does not necessarily ensure his or her moral behavior.

The findings of this study were inconsistent with previous findings that an
individual with higher moral reasoning indicated more ethical behavior outcomes (e.g., Derryberry & Thoma, 2005; Keteflan 1981; Ma, 2003; Malinowski & Smith, 1985; Reynolds & Ceramic, 2007). On the other hand, the results were consistent with other findings lent evidence that moral behavior does not mirror moral reasoning (e.g., Bruggeman & Hart, 1996; Teper, 2009). However, it would be biased to conclude that moral judgment does not function in moral behavior, simply because of lack of sufficient evidence. Nevertheless, Aquino and Freeman (2009) believe the effects of moral judgment on moral behavior depend on the salience of moral identity, which is found to moderate the relationship between moral judgment and moral behavior, such as cheating or donation behavior (Aquino & Reed, 2002). Future research needs to examine the relationship and mechanism between moral judgment and actual moral behavioral outcomes.

In this study, moral judgment only indicated a significant relationship with attitudes toward behavioral outcomes for the American sample, but not for the Chinese sample. Attitude toward behavioral outcome reflects one’s judgment or evaluation of consequences of behavior. Thoma, Rest and Barnett (1986) indicated that moral judgment attempts to understand the reasoning process, whereas the attitude intends to characterize the outcomes or conclusions of such reasoning process. The reason that moral judgment is related to attitude rests in that the process of thinking about moral issues may not complete without taking the outcome of thinking process into consideration.

The results indicated that although the Chinese cohort received higher postconventional thinking scores than American peers, their attitudes toward behavioral outcomes, unfortunately, were not on the same page with their moral thinking process. On the contrary, the Americans’ evaluation of behavior was
congruent with his or her ethical judgment. Such findings were consistent with Felton’s findings about the relationship between moral judgment and attitude toward social responsibility (citing from Thoma, Rest and Barnett, 1986). This is plausibly because once agreed-on consensus is institutionalized into concrete and thoroughly defined and officiated laws or rules (Ma, 1988), Westerners’ attitudes towards unethical behavior are less compromising and more solid. By contrast, Chinese people’s attitudes may be influenced by group norms and change across situations as discussed earlier. Evident support was found in Chan, Wong, and Leung’s study (1998), which indicated a nuanced relationship between ethical judgment and personal attitudes toward consumer behavior, such as buying counterfeit of computer software, among Hong Kong Chinese. Chan, et al. (1998) indicated that it is possible that they hold different standards to evaluate their daily behavior: public and private. That is, Chinese people endorse higher standards pertaining to unethical behavior when they are in the public; whereas uphold less restricted standards when they are alone. Thus, attitudes toward the same behavioral outcomes may differ across cultures. At this point, consistency theory of social psychology may face challenges in Chinese context.

Although Chinese students received higher postconventional scores, the present data set do not allow us to exactly figure out whether the Chinese students superficially percept or misunderstand the real meanings of the ethical concepts such as dignity, welfare, human right, or freedom in Western ethics on the DIT. It still remains unknown whether they have lower standards for a private reason, or they rationalize their self-serving purposes and defend their own interest with Western ethical ideas. Additional work needs further examination.
Social desirability. According to the results, social desirability did not affect the prevailing roles of the Confucian self for the American cohort but it did for the Chinese cohort. Liu, Xiao, and Yang (2003) found that Chinese college students made more “intelligent” responses (such as honesty) than American peers, using Marlowe-Crowne Social Desirability Scale. They suggested that Chinese students may have a higher need for social approval. If the Chinese students were consistent with those students in Liu, Xiao, and Yang’s (2003) study, it appeared that Chinese students preferred socially desirable responses and did not honestly respond to questionnaires in this study. Nevertheless, until recently, very few empirical studies have successfully applied SDS-16 to the Chinese context. Some Chinese researchers (e.g., Liao, 2000; Zhen, 2011) believe that social desirability scale developed within the Western context may not well capture social desirability in terms of the Chinese characteristics. They adapted and indigenized social desirability scales into ones that could reflect the Chinese way of being socially accepted. For instance, the independent self or the individualistic attribute is favored in Western society, whereas the interdependent self or the collective attribute is important in an Eastern society (Sedikides, et al., 2003). Such a difference allows people across cultures to favor distinct ways to be socially accepted. In this case, social desirability tested in this study may not be equivalently perceived by the American and the Chinese students, thus resulting in less meaningful differences of comparison. Given that SDS-16 employed in this study may not appropriately reflect the Chinese way of social desirability, model comparisons with the participation of social desirability would be pointless. Future work needs to pay attention to such differences.
Regional differences.

Regional difference were examined to understand whether different levels of Confucian atmosphere and social environment (modern and Western) influence people’s moral psyche and behavioral outcomes. In this section, discussion focused on relationships among the Confucian self, moral judgment, and moral behavioral tendencies and attitudes toward moral conducts, including comparisons among the Chinese rural-town region (traditional culture better preserved), the urban region (more urbanized or westernized), and the American context (little Confucian atmosphere).

Chinese rural-town cohort versus urban cohort. Addressing regional differences within the Chinese subgroups, only attitudes toward behavioral outcomes significantly predicted moral behavioral tendencies for the Chinese rural-town cohort. Moral judgment did not exert a salient effect on moral behavioral tendencies or attitudes toward behavioral outcomes for either the Chinese rural-town or the urban cohort, as it did not for the Chinese sample as a whole. A concern here is why the Confucian self did not significantly relate to either moral behavioral tendencies or attitudes toward behavioral outcomes for both groups. Especially, although they evidently perceived the self as defined in a Confucian way, they still exhibited higher tendencies in risking behavior and more tolerable attitudes toward these irresponsible behavioral outcomes. Such a concern needs further exploration.

The results indicated that behavioral tendencies were consistent with evaluation of behavior consequences for the rural-town cohort, but not for the urban cohort. Given that the Chinese urban students are less coherent and reliable in thinking and behavior; the findings should be interpreted with caution. This is because the SEM
model determining the associations among the Confucian self, moral behavioral tendencies and attitudes toward conducts was not well fit for the Chinese urban cohort, which may result in insufficient evidence to explain. Some other factors (e.g., the influence of group norm, social environment) that influence their behavioral tendencies and attitudes toward behavior should be considered in the future study.

**Chinese urban sample versus American sample.** The differences between the American and the Chinese urban cohorts were obvious in the relationships among the Confucian self, moral behavioral tendencies and attitudes toward behavioral outcomes. For instance, for the American group, both the Confucian self and moral judgment significantly predicted attitudes toward behavioral outcomes, and both the Confucian self and attitudes toward behavioral outcomes significantly predicted moral behavioral tendencies. Unfortunately, no significant associations were found among the variables of interest for the Chinese urban group.

The results may not indicate that cultural differences are good excuses in explaining the distinctions mentioned above. As discussed earlier, the American students are more likely to be self-disciplined and consistent with what they think or believe in their behavioral activity (Heine, 2001). The weak relationships among the Confucian self, moral judgment, moral behavioral tendencies and attitudes toward behavioral outcomes for the Chinese urban group may be attributable to that ethical education is overwhelmed by examination-oriented education (Dello-Iacovo, 2009). Furthermore, social influence facilitates spreads of self-serving behavior through media or social organizations (Jan, 2005), and some profit-making organizations allow and even encourage these dishonest behaviors to occur, such as providing students with various ways to cheat, to obtain illegal copy of software or book (Wan
& Cao, 2002). Within such social norms, even though Chinese urbanities believe or know it is wrong to engage in unethical behavior, they may still take risk in it. Again, such explanation is partial. It is still noted that the SEM model identifying the relationships among the variables of interest for the urban cohort was poorly fit. Further work needs to examine the other potential influences on differences between the American and the contemporary Chinese urban cohorts.

**General discussion.** Generally, this study provided preliminary evidence that supports the existence of the Confucian self-construct as one unit (instead of the twofold-dimension construct of the Confucian self) and the validity of measure of the Confucian self-scale. The results supported that the Confucian self-scale is distinct from moral judgment, assessed by DIT-2 (discriminative validity, which indicates the measure is unassociated with the dissimilar conceptual construct). The strength of the measure was endorsed in the structural equation modeling analyses, suggesting the conception of the Confucian self as a valid theoretical construction of moral domain. Specifically, the analyses demonstrated the nomological and predictive validity of the Confucian self-measure by providing evidence that the Confucian self correlates with hypothesized related constructs, such as moral behavioral tendencies and attitudes toward behavioral outcomes. However, such findings mainly focused on a single dimension of the Confucian self-construct in behavioral variables. Future work needs to address how broadening process and deepening process separately tap different aspects of the self and whether these two processes show their distinct roles in the outcome variables.

In addition, the results of this study provided evidence that there is a conceptual and perceptual overlap (cultural universality, i.e., etic approach) between the Chinese
and the American students in the terms of the Confucian self-development and differences in sub-dimensions of the Confucian self (specific context, i.e., emic approach) remain between the cross-cultural samples as well. Such a model of moral development in terms of Confucian ethics allows us to have a different lens to understand human nature and moral development, and extends consideration of other possible trajectory of moral development.

One of shortcomings was that this study primarily focused on the monotonic relationships among moral judgment, the Confucian self, and moral behavior tendencies and attitudes toward behavioral outcomes. However, moral development course is a complex and dynamic process. Any a single factor of moral development cannot determine the height of moral maturity. Future research needs to address the mutual relationships among these variables of interest and test whether engagement in moral activity reciprocally benefit Confucian self-development.

The main contribution of this study is the development of a measure that captures Confucian characteristics of self-development. It develops a reliable, valid, and measurable instrument that illustrates Confucian self-development as well as describes Confucian ethics. Evidence is provided to demonstrate the Confucian self as an important predictor of moral behavioral tendencies and attitudes toward behavioral outcomes. This study also reveals globalization of moral development across cultures, extends our understanding of human moral development within Confucian ethics, and enriches knowledge on the psychological constructs of the Confucian self-development, which is applicable to a different culture. Furthermore, the scale of the Confucian self can be used for future study and application. Even if the scale may not straightly applicable to other research of moral self, the experience and methodology reported in this study may be helpful to those researchers of moral
Implication.

Theoretically. The results of this study provide significant implications for Confucian self-development as well as moral behavior. This study contributes to a field of the Confucian self in an Eastern traditional ethics, which is rarely explored in moral psychology, as an alternative course of moral development beyond those moral fields that have been explored, such as moral judgment, moral intuition, moral identity, and moral emotion in the Western perspective. It also enriches our understandings of the roles of the Confucian self in moral development. For instance, the Confucian self has autonomous relationships with moral behavioral tendencies and attitudes toward behavioral outcome. These findings are different from the role of moral identity in Western research, indicating moral identity interacts with moral cognitions to influence moral behavior as an independent factor (e.g., Reynolds & Ceranic, 2007), and moral identity plays a moderating role in the relationship of between moral judgment and charitable behaviors (Reed, Aquino, & Levy, 2007).

Research on the Confucian self of ren empowers theories of moral education not only to highlight the development of students’ ability to clarify universally moral principles and shape moral behaviors, but also to inspire human nature of goodness and nurture inner strength of ren, which will provide an ongoing resource to live harmoniously with others as well as to be honest with one’s self. In this sense, moral education needs to cultivate a moral quality of human beings and stress moral behavior as a result of inner strength of ren.

Practically. With regard to practice, this study provides insights on how to
improve moral quality in human beings. Given the variables of interest in this study, the results indicate that educational psychologists have the potential to influence students’ moral quality in two ways. Overall, the moral quality enhances the likelihood that human beings will be encouraged to perform moral activity as well as will have unceasing resource support for moral behavior.

First, educational psychologists can concentrate on cultivating individual’s Confucian self-development, characterized as ren. Confucian philosophers (e.g., Chan, 1969; Ivanhoe, 2000; Li, 2008; Tu, 1985) suggest that moral quality improves with extending social scopes of the self and deepening of self-knowledge as a human being within the human society and the universe. They also indicate that moral behavioral outcome results from inner mindful state of moral sense and comprehending daily activities laden with moral significance, which are guided by ren. However, such ideas seem abstract and beyond ordinary people’s understanding and practice. In order to ensure accessibility of ordinary people to Confucian self-development, an effective and enduring method that Confucian practitioners found is exemplar teaching—a concrete, practical, and ongoing process provides moral prototype to handle diverse existential situations (Tu, 1985). Contemporarily, successful experience of exemplar teaching in Tangchi town (Anhui) of China was reported in the annual meeting (2006) at United Nations Educational, Scientific and Cultural Organization (UNESCO). As discussed earlier, social and political transformation in China obviously brings about changes in thinking, self-identity, and behavioral performance in the past 30 years. Before exemplar teaching of Confucian ethics, people in the Tangchi town were self-centered and devalued moral thoughts and conducts. After three months exemplar teaching, the effect of exemplar teaching of Confucian ethics and li is evident on improvement of individual moral maturity (Confucian self-identity and moral
behavior) and ethical quality of the Tangchi town (Cai, 2008; Dutoutnier & Zhe, 2009; Tang, 2007). Moral quality does not rely on learning a set of abstract knowledge of moral rules, moral principles, or rote moral performance. Instead, ordinary people need moral examples to model their behavior, to authentically perceive and handle ethical issues, and to comprehend self-knowledge as emphasized in the Confucian thoughts.

Second, educational psychologists can also place emphasis on individuals’ moral judgment development. Postconventional thinking (advanced moral thinking) has been demonstrated to contribute to altruistic behavior in the workplace (Chin & Chou, 2013). Although moral judgment does not directly relate to moral behavioral tendencies in the present study, it still indirectly associates with moral behavioral tendencies through the role of attitudes toward behavioral outcomes (e.g., Model 50). Cognitive developmental theories on moral development (e.g., Kohlberg, 1984) suggest and empirical evidence (Kracher et al., 2002; Thoma, & Davison, 1983; Wimalasiri, 2004) confirms the imperative role of formal education in moral judgment development, affirming that moral curriculum is essential in educational settings. Furthermore, Thoma, Rest, and Barnett (1986) compiled a review of studies and summarized those studies centering on moral behavior consistently exhibit a significant relationship with moral judgment (DIT score). Thus, ethics training may assist individuals to translate into socially acceptable behavior through indirect influence of moral thinking development.

**Limitation and future research direction.**

**Limitation.** Like many other studies, this study has its own limitations. First, the Confucian self-scale developed in this study may not be equally perceived by
cross-cultural samples. For instance, it was found that American students reported higher scores on the family subscale than their Chinese peers. Although filial piety was found among American responses in an earlier study (e.g., Zane & Yeh, 2002), Cheng and Chan (2006) indicated that Westerners and Chinese perceive filial piety in different ways. That is, Westerners tend to regard filial piety as physical help when their parents are in need, whereas Chinese tend to consider filial piety as emotional connection and devotion to family, in addition to physical contribution. At this point, it remains unclear whether the American students responded to the Confucian self-scale with a similar affective sense of Confucian self as their Chinese peers. Given that the American students responded to the items without a deep understanding of Confucian characteristics, it is possible that their responses represented a social understanding that overlaps with Confucian perspective, but is qualitatively different. Future research needs to revise the Confucian self-scale through attention to those items that evokes emotional considerations, which in turn, would enhance the reliability of the Confucian self-scale.

The second shortcoming is that sample selected in this study was based on the university cohorts. Samples recruited were at university level, which is narrowly age-range. For one thing, these participants are in a developing phase and experience transition from an adolescent from an adult. Limited life experience, partially developed understanding of universal principles may have restricted them to fully develop Confucian thoughts or become moral maturity. For instance, Chinese elderly are found to be more consistent with traditional Confucian thoughts than their younger generations (Cheng & Chan, 2006; Yue & Ng, 1999). Young generations interpret the Confucian self with their own explanation. For another, absence of appropriate ethical education or Confucian education in current school environment
may increase difficulty for the contemporary college students to perceive the self in the Confucian way, thus bringing about biased results. Thus, additional research would be benefited from a more extensive examination of special population who receives Confucian education and grows in the Confucian contexts, allowing better understanding the course of Confucian self-development. Also, it would be interesting to compare and contrast Confucian self-development between the sample with Confucian education and the sample without.

The third limitation of this study is that all variables assessed in this study rely on self-reported scales. Students’ responses may have been self-presented and their responses may not be genuine if they tried to meet researchers’ expectation of study. Thus the validity may have weakened and the results may have been challenged. Future research needs to control self-presentation. As discussed earlier, it is important to tease social desirability out from the variables of interest. Although social desirability was assessed with SDS-16 in study, it appeared that Chinese social desirability might not be exactly expressed in a Western way. Future research needs to utilize an appropriate measure that equally captures social desirability across cultures. Furthermore, moral judgment was assessed with a short version of DIT-2 (having lower reliability than that of full version) in this study, which may have restricted our understanding of moral schemas that students preferred in the given moral situation. Future work needs to employ the full version of DIT-2 or other equivalent measure to completely evaluate individuals’ moral judgment development. Last, there is a need for future exploration to measure actually moral behavior within the real life context, which would strengthen the validity of study and help further in understanding of the links among Confucian self, moral judgment development, and actual moral behavior. In short, appropriate measurements that authentically capture human development of
morality would aid in understanding of relationships among the Confucian self, moral judgment development, and moral behavioral outcome.

**Future research direction.** Preliminary evidences are provided to demonstrate the existence of the Confucian self in moral psychological construct. One may be interested in how the Confucian self develops. Western scholars, Hardy and Carlo (2005) believed that it is important to identify factors that form moral identity, because this kind of knowledge may be helpful to moral education. A variety of Western models attempt to explain the process of moral self or moral identity development. For instance, social personality perspective suggests the moral identity development is grounded on social interactions (Colby & Damon, 1992), and such human interactions make possible individual become to understand moral principles (Hardy & Carlo, 2011). Some other models indicate that moral self develops in terms of moral schemas, which provides one with moral prototypes to think and act (Narvaez & Lapsley, 2005). Particularly, moral schema enables one to easily access cognitive information on moral issue. Future empirical study needs to address whether these Western models of moral self/identity development apply to the model of Confucian self-development. Specific focuses need to be addressed on whether broadening process and the deepening process mutually develop and what other potential factors may speed up moral growth of Confucian self. These studies would be invaluable to both theoretical understanding of human development and empirical moral education.

Second, although the Confucian self demonstrates its important roles in moral behavioral tendencies and attitudes toward behavioral outcomes for both the Chinese and American samples in the present study, little is known about what specific roles
that the Confucian self has in moral outcome, i.e., the mechanism of the Confucian
self in associating with moral outcome. In Western research, Hardy and Carlo (2005)
suggest that when one’s moral exemplar becomes important to one’s sense of self, the
impetus to be consistent with their sense increase in order to be moral. Likewise,
exemplar teaching is underscored in Confucian ethics. However, such mechanism still
remains unexamined. Theoretically, Confucian self of ren serves an inexhaustible
inner source that encourages one to think and act in a moral way in Confucian
perspective (Tu, 1985). It would be of interest to explore how does inner strength of
ren ensure moral commitment that impels one to endure morally in everyday activities.
Also, some Western researchers (e.g., Youniss & Yates, 1997) suggest that relations
between moral self formation and moral conduct are reciprocal. That is, engagement
in moral activity facilitates moral self formation, and in turn, moral self serves as a
source of moral commitment and motives one to behave morally. Additional work
may need to examine whether Confucian self-development experiences a similarly
mutual relationship with moral behavior.

Last, it should be cautious when describing or testing moral development with an
explicit tool in the future cross-cultural research. It is undeniable that some
researchers merely apply certain measure mechanically in other social or cultural
context, and neglect cultural pluralism. Semantic differential or inadequate
translations may result in misinterpretation of moral development across culture. It
would become a threat to validity of a cross-cultural study if the differences are
casted by semantic differential or translation rather than by the cultures per se
(Beaton et al., 2000; Peña, 2007). Also, the cross-cultural research should pay
attention to syntheses of etic (universal) and emic (in-depth analysis of culture)
dimensions of moral development. The power of an integrative work resides in its
ability to highlight the commonalities of moral development across all human beings and allow the differences co-existing between the diverse cultural contexts as well (King & McInerney, 2014). Western models of intra-individual aspects of moral development may be complemented by non-Western models of inter-individual or social and relational aspects of moral development. Such an integration would aid in further understanding human moral development in terms of cultural universality and openness to specific settings.
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APPENDICIES

Appendix A

The Confucian self-measure

Listed below are some characteristics that may describe a person. The person with these characteristics could be you or it could you someone 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.

Traits

Filial piety, Responsibility, Sincerity, Trustworthiness, Conscientiousness, Modest/Humility, Broadmindedness (open-mind), Tolerance, Humanity, Altruism (forgiveness), Moderation

Make sure you keep these traits in mind, and continue the following items.

1. These characteristics suggest that I always have deep and sincere respect for my parents.
2. Being a trustworthy friend is consistent with these characteristics.
3. Having these characteristics, one stands up tall and straight.
4. These characteristics encourage us to understand how to treat nature.
5. When drinking, eating, sitting or walking, one with these characteristics always lets the elderly go first.
6. If I am poor, I think these characteristics mean nothing.
7. It is human nature to develop these characteristics.
8. These characteristics encourage me to help my neighbor out when he/she needs assistance.
9. A person with these characteristics cares for people.
10. Activities of propriety I do clearly identify me as having these characteristics.
11. These characteristics are out of date, and I don’t think they are important in my life.
12. One who has these characteristics is humane to all people in the world.
13. These characteristics are inherent in human beings.
14. People with these characteristics understand that human beings have a connection with the cosmos.
15. When I'm away from home, keeping in touch with parents is consistent with these characteristics.
16. A person with these characteristics works hard to demonstrate a good society manner (propriety).
17. One with these characteristics understands that it is human nature to sincerely respect everything, everyone, and even Heaven and Earth.
18. I don't think it's important for one to develop or grow these characteristics.
19. A person uses his words to emphasize the principles underlying these characteristics.
20. When I'm at home, these characteristics encourage me to help my parents with
housework to reduce their workload.
21. A person with these characteristics speaks in a clear and direct way.
22. Friends/relatives deserve my respect and care as I have these characteristics.
23. These characteristics are the inner quality of the heart-mind.
24. With these characteristics, I take good care of my parents day and night when they are ill.
25. A god leader makes an effort to model good behavior as defined by these characteristics.
26. When speaking, one with these characteristics makes the words clear and to the point.
27. The profound-man with these characteristics is free from anxiety and fear.
28. I often reflect whether or not I treat others with these characteristics.
29. These characteristics imply that my parents are always in my heart no matter where I am.
30. I try my best to treat people honestly as I have these characteristics.
31. These characteristics allow one to see human beings and animals as sharing equivalent rights.
32. These characteristics are desired and valued.
33. A good leader with these characteristics who is willing to change his/her mind when he/she is wrong.
34. These characteristics are important to who I am.
35. These characteristics suggest that I treat my peers as if they are my own brothers and sisters.
36. When I address an elderly, never calling him/her by his/her given name is consistent with these characteristics.
37. These characteristics do not suggest that I yell at my parents.
38. People with these characteristics understand the universe is a coherent system (big "I" or "great self").
39. These characteristics are important to maintain friendships.
40. When I see someone who does a good thing or has good personal traits, I'm aspired to learn their traits and their examples with these characteristics.
41. With these characteristics, I feel happy with life.
42. When I see someone who makes a mistake, these characteristics encourage me to learn from others' mistakes.
43. When I see the elderly in need, these characteristics encourage me to treat them as if I'm serving my parents.
44. When traveling aboard, these characteristics suggest me respect everyone I meet.
45. A person with these characteristics feels love for all living creatures.
46. One with these characteristics asks permission before he/she enters a room.
47. A person with characteristics devotes himself to improving his country.
Appendix B

Moral behavioral tendency measure

Below you will find a list of statements concerning daily activities. Please read each statement carefully and decide if that statement to what degree describes you in terms of frequency.

1. Not participating in group-work since the other members would complete it
2. Stealing a peer’s personal items
3. Using others’ account to log in without permission
4. Copying others’ work
5. Keeping a promise because of personal interest
6. Kissing in public areas
7. Throwing away a to-go bag in public areas (not in trash can)
8. Developing a virus to attack others’ computers
9. Falsifying a bibliography when writing
10. Doing personal business in class
11. Illegally copying or decoding copyright software
12. Copying materials without footnoting
13. Talking or speaking on the phone loudly in a quiet area of library
14. Refusing to repay tuition loan money
15. Jumping ahead of the line in a restaurant
16. Copying from another student when taking an exam or a test
17. Not giving a hand when seeing someone in need (starving, cold, etc.)
18. Buying or using illegal books or software
19. Spreading a rumor to hurt someone you don’t like
20. Using personal relations or resources to gain scholarship or honors
21. Using notes for quick when taking a closed book exam
22. Not flushing toilet after using
23. Joking about other students’ religious beliefs or life styles
24. Bullying students from rural areas
25. Stealing public material or supplies for personal uses

Attitudes toward behavioral outcomes

Attitudes toward behavioral outcomes asked “How are these behaviors acceptable for you?” (behavioral outcomes are stated above)
Appendix C  The Defining Issues Test-2

DIT-2
Defining Issues Test
Version 3.1

DIT-2
Defining Issues Test
Version 3.1

Instructions

This questionnaire is concerned with how you define the issues in a social problem. Several stories about social problems will be described. After each story, there will be a list of questions. The questions that follow each story represent different issues that might be raised by the problem. In other words, the questions/issues raise different ways of judging what is important in making a decision about the social problem. You will be asked to rate and rank the questions in terms of how important each one seems to you.

This questionnaire is in two parts: one part contains the INSTRUCTIONS (this part) and the stories presenting the social problems; the other part contains the questions (issues) and the ANSWER SHEET on which to write your responses.

Here is an example of the task:

Presidential Election

Imagine that you are about to vote for a candidate for the Presidency of the United States. Imagine that before you vote, you are given several questions, and asked which issue is the most important to you in making up your mind about which candidate to vote for. In this example, 5 items are given. On a rating scale of 1 to 5 (1=Great, 2=Much, 3=Some, 4=Little, 5=Not) please rate the importance of the item (issue) by filling in with a pencil one of the bubbles on the answer sheet by each item.

Assume that you thought that item #1 (below) was of great importance, item #2 had some importance, item #3 had no importance, item #4 had much importance, and item #5 had much importance. Then you would fill in the bubbles on the answer sheet as shown below.

<table>
<thead>
<tr>
<th>GREAT</th>
<th>MUCH</th>
<th>SOME</th>
<th>LITTLE</th>
<th>NOT</th>
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<tr>
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</tbody>
</table>

1. Financially are you personally better off now than you were four years ago?
2. Does one candidate have a superior moral character?
3. Which candidate stands the tallest?
4. Which candidate would make the best world leader?
5. Which candidate has the best ideas for our country's internal problems, like crime and health care?

Further, the questionnaire will ask you to rank the questions in terms of importance. In the space below, the numbers 1 through 12, represent the item number. From top to bottom, you are asked to fill in the bubble that represents the item in first importance (of those given you to choose from), then second most important, third most important, and fourth most important. Please indicate your top four choices. You might fill out this part, as follows:

Rank which issue is the most important (item number).

Most important Item: Item 1: Item 2: Item 3: Item 4: Item 5: Item 6: Item 7: Item 8: Item 9: Item 10: Item 11: Item 12:
Second most important: Item 1: Item 2: Item 3: Item 4: Item 5: Item 6: Item 7: Item 8: Item 9: Item 10: Item 11: Item 12:
Third most important: Item 1: Item 2: Item 3: Item 4: Item 5: Item 6: Item 7: Item 8: Item 9: Item 10: Item 11: Item 12:
Fourth most important: Item 1: Item 2: Item 3: Item 4: Item 5: Item 6: Item 7: Item 8: Item 9: Item 10: Item 11: Item 12:

Note that some of the items may seem irrelevant to you (as in item #U) or not make sense to you—in that case, rate the item as "No" importance and do not rank the item. Note that in the stories that follow, there will be 12 items for each story, not five. Please make sure to consider all 12 items (questions) that are printed after each story.

In addition you will be asked to state your preference for what action to take in the story. After the story, you will be asked to indicate the action you favor on a three-point scale (1 = strongly favor same action, 2 = can't decide, 3 = strongly oppose that action).

In short, read the story from this booklet, and then fill out your answers on the answer sheet. Please use a #2 pencil. If you change your mind about a response, erase the pencil mark clearly and color your new response.

[Notice the second part of this questionnaire, the Answer Sheet. The Identification Number at the top of the answer sheet may already be filled in when you receive your materials. If not, you will receive instructions about how to fill in the number. If you have questions about the procedure, please ask now.

Please turn now to the Answer Sheet]
Famine — (Story #1)

The small village in northern India has experienced shortages of food before, but this year’s famine is worse than ever. Some families are even trying to feed themselves by making soup from tree bark. Mustaq Singh’s family is near starvation. He has heard that a rich man in his village has supplies of food stored away and is hoarding food while its price goes higher so that he can sell the food later at a huge profit. Mustaq is desperate and thinks about stealing some food from the rich man’s warehouse. The small amount of food that he needs for his family probably wouldn’t even be missed.

[If at any time you would like to re-read a story or the instructions, feel free to do so. Now turn to the Answer Sheet, go to the 12 issues and rate and rank them in terms of how important each issue seems to you.]

Reporter — (Story #2)

Molly Dayton has been a news reporter for the Gazette newspaper for over a decade. Almost by accident, she learned that one of the candidates for Lieutenant Governor for her state, Grover Thompson, had been arrested for shoplifting 20 years earlier. Reporter Dayton found out that early in his life, Candidate Thompson had undergone a confused period and since then, but built a distinguished record in helping many people and in leading constructive community projects. Now, Reporter Dayton regards Thompson as the best candidate in the field, and likely to go on to important leadership positions in the state. Reporter Dayton wonders whether or not she should write the story about Thompson’s earlier troubles because in the upcoming close and heated election, she fears that such a news story could wreck Thompson’s chances to win.

[Now turn to the Answer Sheet, go to the 12 issues for this story, rate and rank them in terms of how important each issue seems to you.]

School Board — (Story #3)

Mr. Grant has been elected to the School Board District 190 and was chosen to be Chairman. The district is bitterly divided over the closing of one of the high schools. One of the high schools has to be closed for financial reasons, but there is no agreement over which school to close. During his election to the school board, Mr. Grant had proposed a series of "Open Meetings" in which members of the community could voice their opinions. He hoped that dialogue would make the community realize the necessity of closing one high school. Also he hoped that through open discussions, the difficulty of the decision would be appreciated, and that the community would ultimately support the school board decision. The first Open Meeting was a disaster. Passionate speeches dominated the microphone and threatened violence. The meeting was barely closed without fist-fights. Later in the week, school board members received threatening phone calls. Mr. Grant wonders if he ought to call off the next Open Meeting.

[Now turn to the Answer Sheet, go to the 12 issues for this story, rate and rank them in terms of how important each issue seems to you.]

Cancer — (Story #4)

Mrs. Bennett is 62 years old and, in the last stages of colon cancer. She is in terrible pain and asks the doctor to give her more pain-killing medicine. The doctor has given her the maximum safe dose already and is reluctant to increase the dosage because it would probably hasten her death. In a clear and rational mental state, Mrs. Bennett says that she realizes this, but she wants to end her suffering even if it means ending her life. Should the doctor give her an increased dosage?

[Now turn to the Answer Sheet, go to the 12 issues for this story, rate and rank them in terms of how important each issue seems to you.]

Demonstration — (Story #5)

Political and economic instability in a South American country prompted the President of the United States to send troops to "police" the area. Students at many campuses in the U.S.A. have protested that the United States is using its military might for economic advantage. There is widespread suspicion that big oil multinational companies are pressuring the President to safeguard a cheap oil supply even if it means loss of life. Students at one campus took to the streets, in demonstrations, tying up traffic and stopping regular business in the town. The president of the university demanded that the students stop their illegal demonstrations. Students then took over the college’s administration building, completely paralyzing the college. Are the students right to demonstrate in these ways?

[Now turn to the Answer Sheet, go to the 12 issues for this story, rate and rank them in terms of how important each issue seems to you.]

223
Rate the following 12 issues in terms of importance (1-5)

1. Is Munasinghe’s campaign honest enough to win the trust of the voters?
2. Is it a matter of public interest to do away with the winning candidate?
3. Should the party be held responsible for the candidate’s actions?
4. Should the party be held responsible for the candidate’s actions?
5. Should the party be held responsible for the candidate’s actions?
6. Should the party be held responsible for the candidate’s actions?
7. Should the party be held responsible for the candidate’s actions?
8. Should the party be held responsible for the candidate’s actions?
9. Should the party be held responsible for the candidate’s actions?
10. Should the party be held responsible for the candidate’s actions?
11. Should the party be held responsible for the candidate’s actions?
12. Should the party be held responsible for the candidate’s actions?

Rate which issue is the most important (1-5)

Most important item
Second most important
Third most important
Fourth most important
Fifth most important

Now please return to the Instructions booklet for the next story.

Do you favor the action of giving more medicine?

Should give Mrs. Bennett an increased dosage to make her live
Can’t decide
Should not give her an increased dosage

Rate the following 12 issues in terms of importance (1-5)

1. Isn’t the doctor obligated by the same laws as everybody else if giving an overdose would be the same as killing her?
2. Wouldn’t society be better off without so many laws about what doctors can and cannot do?
3. If Mrs. Bennett dies, would the doctor be legally responsible for her death?
4. Is that the proper course of action to take for the patient?
5. Was the patient’s health in the hospital a matter of public interest?
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10. Was the patient’s health in the hospital a matter of public interest?
11. Was the patient’s health in the hospital a matter of public interest?
12. Was the patient’s health in the hospital a matter of public interest?

Rate which issue is the most important (1-5)

Most important item
Second most important
Third most important
Fourth most important
Fifth most important

Now please return to the Instructions booklet for the next story.
**Demonstration -- (Noisy #5)**

Do you favor the action of demonstrating in this way?

- Should continue demonstrating in these ways?
- Can't decide
- Should not continue demonstrating in these ways?

**Rate the following 12 issues in terms of importance (1-5)**

1. Do the students have any right to take over property that doesn't belong to them?
2. Do the students realize they might be arrested and fined, and even expelled from school?
3. Are the students serious about their cause or are they doing it just for fun?
4. If the university president is soft on students this time, will it lead to more disorder?
5. Will the public blame all students for the actions of a few student demonstrators?
6. Are the authorities to blame by giving in to the greed of the multinational oil companies?
7. Why should a few people like Presidents and business leaders have more power than ordinary people?
8. Does this student demonstration bring about more or less good in the long run to all people?
9. Can the students justify their civil disobedience?
10. Shouldn't the authorities be respected by students?
11. Is taking over a building consistent with principles of justice?
12. Isn't it everyone's duty to obey the law, whether one likes it or not?

Please provide the following information about yourself:

1. Age in years:
2. Sex (mark one):
   - Male
   - Female
3. Level of Education (mark highest level of formal education attained, if you are currently working at that level: e.g., Freshman in college) or if you have completed that level: e.g., if you finished your Freshman year but have gone on no further):
   - Grade 1 to 5
   - Grade 6
   - Grade 7, 8, 9
   - Grade 10
   - Grade 11, 12
   - Vocational/technical school without a bachelor's degree
   - Auto mechanic, beauty school, real estate, secretary, 2-year nursing program
   - Junior college (e.g., 2-year college, community college, Associate Arts degree)
   - Freshman in college in bachelor degree program
   - Sophomore in college in bachelor degree program
   - Junior in college in bachelor degree program
   - Senior in college in bachelor degree program
   - Professional degree (bachelor's degree beyond bachelor's degree) e.g., M.D., M.S.A., Bachelor of Osteopathy, D.O.S. in Dentistry, J.D. in law, Masters of Arts in teaching, Masters of Education in teaching, Doctor of Psychology (Ph.D. or Ed.D.), Masters degree (in-academic graduate school)
   - Doctoral degree (in-academic graduate school, e.g., Ph.D. or Ed.D.)
   - Other Formal Education (Please describe:

4. In terms of your political views, how would you characterize yourself (mark one)?
   - Very Liberal
   - Somewhat Liberal
   - Neither Liberal nor Conservative
   - Somewhat Conservative
   - Very Conservative

5. Are you a citizen of the U.S.A.?
   - Yes
   - No

6. Is English your primary language?
   - Yes
   - No

**Thank You.**

PLEASE DO NOT WRITE IN THIS AREA

1052736

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**Dilemma #6**

Do you favor the action?

- Strongly Favor
- Slightly Favor
- Neutral
- Slightly Oppose
- Oppose
- Strongly Oppose

**Rate the following 12 issues in terms of importance (1-5)**

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**Dilemma #7**

Do you favor the action?

- Strongly Favor
- Slightly Favor
- Neutral
- Slightly Oppose
- Oppose
- Strongly Oppose

**Rate the following 12 issues in terms of importance (1-5)**

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Appendix D

Social Desirability Scale-16
Joachim Stoeber

Below you will find a list of statements. Please read each statement carefully and decide if that statement describes you or not. If it describes you, check the word "true"; if not, check the word "false".

1. I sometimes litter.
2. I always admit my mistakes openly and face the potential negative consequences.
3. In traffic I am always polite and considerate of others.
4. I always accept others' opinions, even when they don't agree with my own.
5. I take out my bad moods on others now and then.
6. There has been an occasion when I took advantage of someone else.
7. In conversations I always listen attentively and let others finish their sentences.
8. I never hesitate to help someone in case of emergency.
9. When I have made a promise, I keep it—no ifs, ands or buts.
10. I occasionally speak badly of others behind their back.
11. I would never live off other people.
12. I always stay friendly and courteous with other people, even when I am stressed out.
13. During arguments I always stay objective and matter-of-fact.
14. There has been at least one occasion when I failed to return an item that I borrowed.
15. I always eat a healthy diet.
16. Sometimes I only help because I expect something in return.
Appendix E

Invitation letter for recruiting potential participants

Dear students,

You are invited to participate in a study, concerning personal traits, daily activities, and moral reasoning. All information gathered will be anonymous. Your responses will never be associated with your name, and your instructor will never know your responses either.

Your participation is recommended to complete before December 1st, 2013, and then you will earn class credits for your participation. If you are interested in this study, please use take survey with 3-digit number. Your 3-digit number is________. The link for survey is:________________________________________. Please feel free to stop at any time. If you have any questions, please feel free to contact me at (email address)____________. THANK YOU!

Best wishes,

Hong Jiang
Doctoral Candidate, Educational Psychology Program
The University of Alabama
Appendix F

Spearman-Brown formula for reliability with fewer items

Spearman-Brown formula \( r_{kk} = k(r_{11}) / [1 + (k - 1)r_{11}] \)

- \( r_{kk} \) = reliability of the test \( k \) times as long as the original test
- \( r_{11} \) = reliability of original test
- \( k \) = factor by which the length of the test is changed
Appendix G

September 24, 2013

Hong Jiang
College of Education
The University of Alabama
Box 870231

Re: IRB # 13-OR-298, “Describing and testing a measure of Confucian
self: A preliminary validity study”

Dear Ms. Jiang:

The University of Alabama Institutional Review Board has granted
approval for your proposed research.

Your application has been given expedited approval according to 45 CFR
part 46. Approval has been given under expedited review category 7 as
outlined below:

(7) Research on individual or group characteristics or behavior
(including, but not limited to, research on perception, cognition,
motivation, identity, language, communication, cultural beliefs or
practices, and social behavior) or research employing survey, interview,
oral history, focus group, program evaluation, human factors evaluation,
or quality assurance methodologies.

Your application will expire on September 23, 2014. If your research will
continue beyond this date, please complete the relevant portions of the
IRB Renewal Application. If you wish to modify the application, please
complete the Modification of an Approved Protocol Form. Changes in this
study cannot be initiated without IRB approval, except when necessary to
eliminate apparent immediate hazards to participants. When the study
closes, please complete the Request for Study Closure Form.

Please use reproductions of the IRB approved stamped consent forms to
obtain consent from your participants.

Should you need to submit any further correspondence regarding this
proposal, please include the above application number.

Good luck with your research.

Sincerely,

Carpaneto T. Myles, MSW, CIM
Director & Research Compliance Officer
Office for Research Compliance
The University of Alabama
## Appendix H

### Critical Values of the $\chi^2$ Distribution

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<td>48.758</td>
<td>51.739</td>
<td>55.329</td>
<td>85.527</td>
<td>90.531</td>
<td>95.023</td>
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</tr>
<tr>
<td>80</td>
<td>51.172</td>
<td>53.540</td>
<td>57.153</td>
<td>60.391</td>
<td>64.278</td>
<td>96.578</td>
<td>101.879</td>
<td>106.629</td>
<td>112.329</td>
</tr>
<tr>
<td>90</td>
<td>59.196</td>
<td>61.754</td>
<td>65.647</td>
<td>69.126</td>
<td>73.291</td>
<td>107.565</td>
<td>113.145</td>
<td>118.136</td>
<td>124.116</td>
</tr>
<tr>
<td>100</td>
<td>67.328</td>
<td>70.065</td>
<td>74.222</td>
<td>77.929</td>
<td>82.358</td>
<td>118.498</td>
<td>124.342</td>
<td>129.561</td>
<td>135.807</td>
</tr>
</tbody>
</table>
Appendix I

Differences by Level of Confucian Knowledge

If modern Chinese Confucian self-development is subject to vary depending on differences of societal change, location, or the extent of westernization, one would wonder how one’s Confucian knowledge affects his/her identity of being a Confucian. The former focuses on external influences, while the latter places emphasis on internal strengths. When Chinese students were asked to report their level of Confucian knowledge, 13 students reported “not at all”, 187 students reported “a little”, 171 students reported “some”, and only 9 students reported “a lot”. Accordingly, these students were categorized into two cohorts: one was “no ~ a little” group (or low level of Confucian knowledge group, and hereafter the low level group for brief), and the other one was “some ~ a lot” group (or high level of Confucian knowledge group, and hereafter the high level group for brief). This section attempted to test whether Chinese students differ in the Confucian self-development, and other variables of interest depending on their degree of Confucian knowledge.

Confucian Self

Mean differences on the Confucian self by level of Confucian knowledge.

According to Table 42, reliability of each observed variable of the Confucian self was found to good for both groups in terms of level of Confucian knowledge. This provided satisfactory foundation for later examination of differences of Confucian self-development. Table 43 provided descriptive summaries of the Confucian self scores for the two groups. Overall, the high level group reported higher scores of the Confucian self than the low level group. Two-way ANOVA (gender by level of Confucian knowledge) did not find significant interaction effect across all observed
variables of the Confucian self. Except observed variables of the family and soul, the main effect for level of Confucian knowledge was found to be significant on variables of the community, $F(1,378)=8.54$, $p = .004$, $\eta^2 = .022$, country, $F(1,378)=19.44$, $p < .001$, $\eta^2 = .049$, world, $F(1,378)=4.49$, $p = .035$, $\eta^2 = .012$, body, $F(1,378)=9.64$, $p = .002$, $\eta^2 = .025$, mind, $F(1,378)=18.56$, $p < .001$, $\eta^2 = .047$, and spirit, $F(1,378)=5.24$, $p = .023$, $\eta^2 = .014$. The main effect for gender was only found to be significant on mind, $F(1,378)=4.79$, $p = .029$, $\eta^2 = .013$.

Table 42

<table>
<thead>
<tr>
<th>Area</th>
<th>Variable</th>
<th>Number of items</th>
<th>Reliability (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Level</td>
<td>Family</td>
<td>6</td>
<td>.67</td>
</tr>
<tr>
<td>(N=200)</td>
<td>Community</td>
<td>6</td>
<td>.60</td>
</tr>
<tr>
<td></td>
<td>Country</td>
<td>6</td>
<td>.71</td>
</tr>
<tr>
<td></td>
<td>World</td>
<td>5</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>7</td>
<td>.71</td>
</tr>
<tr>
<td></td>
<td>Mind</td>
<td>6</td>
<td>.69</td>
</tr>
<tr>
<td></td>
<td>Soul</td>
<td>6</td>
<td>.53</td>
</tr>
<tr>
<td></td>
<td>Spirit</td>
<td>4</td>
<td>.61</td>
</tr>
<tr>
<td>High Level</td>
<td>Family</td>
<td>6</td>
<td>.73</td>
</tr>
<tr>
<td>(N=180)</td>
<td>Community</td>
<td>6</td>
<td>.70</td>
</tr>
<tr>
<td></td>
<td>Country</td>
<td>6</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td>World</td>
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<td>.67</td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>7</td>
<td>.72</td>
</tr>
<tr>
<td></td>
<td>Mind</td>
<td>6</td>
<td>.68</td>
</tr>
<tr>
<td></td>
<td>Soul</td>
<td>6</td>
<td>.61</td>
</tr>
<tr>
<td></td>
<td>Spirit</td>
<td>4</td>
<td>.72</td>
</tr>
</tbody>
</table>

Note:
1. Mind (item 3)\(^{16}\) was deleted for a higher reliability. If not deleted, (α) = .49 for the low level group, and (α) = .48 for the high level group. Thus, there are 6 items of the variable of mind for both the low level and the high level groups.

**Correlations between variables by level of Confucian knowledge.** Correlations among observed variables of the Confucian self were calculated (Table 44). Literally, except correlations between the family and soul, and family and spirit, correlations

\(^{16}\) Item 3 of mind: I don’t think it’s important for one to develop these characteristics.
among the observed variables of the Confucian self were found to be higher for the high level group than the low level group. In other words, the high level cohort reported stronger correlations between observed variables of the Confucian self than the low level cohort. However, a significant difference between these two groups was only found on the correlation between mind and soul, $Z = -2.32$, $p = .02$. Taken together, it appeared that both the low level and the high level groups identified the relationships among the observed variables of the Confucian self at the same degree, and the relationship between the mind and soul defined by the high level group was significantly stronger than that of the low level group.
### Table 43

**Mean and Standard Deviation for the Confucian Self and Its Sub-Scales by Gender and Level of Confucian Knowledge**

<table>
<thead>
<tr>
<th>Variables</th>
<th>G</th>
<th>N</th>
<th>M1</th>
<th>SD</th>
<th>M1</th>
<th>SD</th>
<th>M1</th>
<th>SD</th>
<th>M1</th>
<th>SD</th>
<th>M1</th>
<th>SD</th>
<th>M1</th>
<th>SD</th>
<th>M1</th>
<th>SD</th>
<th>M1</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Confucian knowledge</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>123</td>
<td>45.91</td>
<td>5.54</td>
<td>43.94</td>
<td>5.25</td>
<td>42.49</td>
<td>6.14</td>
<td>33.44</td>
<td>5.52</td>
<td>43.25</td>
<td>7.77</td>
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<td>36.12</td>
<td>5.84</td>
<td>23.84</td>
<td>4.84</td>
<td>317/30</td>
</tr>
<tr>
<td>M</td>
<td>76</td>
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<td>5.91</td>
<td>43.93</td>
<td>5.15</td>
<td>41.47</td>
<td>6.80</td>
<td>33.58</td>
<td>5.44</td>
<td>43.72</td>
<td>8.52</td>
<td>46.33</td>
<td>6.00</td>
<td>36.53</td>
<td>6.64</td>
<td>24.09</td>
<td>5.33</td>
<td>314.93</td>
</tr>
<tr>
<td>T</td>
<td>199</td>
<td>45.59</td>
<td>5.66</td>
<td>43.94</td>
<td>5.19</td>
<td>42.12</td>
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<td>5.47</td>
<td>43.44</td>
<td>8.02</td>
<td>47.54</td>
<td>6.40</td>
<td>36.32</td>
<td>6.15</td>
<td>23.95</td>
<td>5.01</td>
<td>316.12</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>F</td>
<td>128</td>
<td>47.33</td>
<td>5.50</td>
<td>45.52</td>
<td>5.00</td>
<td>44.84</td>
<td>6.14</td>
<td>34.73</td>
<td>5.64</td>
<td>45.87</td>
<td>8.23</td>
<td>50.80</td>
<td>6.23</td>
<td>37.58</td>
<td>6.21</td>
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<td>5.61</td>
<td>332.35</td>
</tr>
<tr>
<td>M</td>
<td>52</td>
<td>46.08</td>
<td>6.79</td>
<td>45.73</td>
<td>6.05</td>
<td>45.06</td>
<td>6.32</td>
<td>34.92</td>
<td>6.36</td>
<td>46.73</td>
<td>8.91</td>
<td>49.77</td>
<td>6.02</td>
<td>37.21</td>
<td>7.01</td>
<td>24.98</td>
<td>6.34</td>
<td>330.48</td>
</tr>
<tr>
<td>T</td>
<td>180</td>
<td>46.97</td>
<td>5.91</td>
<td>45.58</td>
<td>5.29</td>
<td>44.90</td>
<td>5.78</td>
<td>34.79</td>
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<td>37.40</td>
<td>6.43</td>
<td>25.48</td>
<td>5.82</td>
<td>331.81</td>
</tr>
</tbody>
</table>

Note: G=gender, F=female, M=male, T=total, Fam=family, Com=community, Cntry= country, Wld= world, CS= Confucian self, M1=Mean, SD=Standard Deviation.

### Table 44

**Correlations among Indicators of the Confucian Self and Its Sub-Scales by Gender and Level of Confucian Knowledge**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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</thead>
<tbody>
<tr>
<td>1. Family</td>
<td></td>
<td>.70**</td>
<td>.64**</td>
<td>.46**</td>
<td>.49**</td>
<td>.45**</td>
<td>.43**</td>
<td>.35**</td>
</tr>
<tr>
<td>2. Community</td>
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<td></td>
<td>.78**</td>
<td>.65**</td>
<td>.63**</td>
<td>.55**</td>
<td>.56**</td>
<td>.47**</td>
</tr>
<tr>
<td>3. Country</td>
<td>.60**</td>
<td>.72**</td>
<td></td>
<td>.70**</td>
<td>.71**</td>
<td>.56**</td>
<td>.60**</td>
<td>.53**</td>
</tr>
<tr>
<td>4. World</td>
<td>.43**</td>
<td>.61**</td>
<td>.68**</td>
<td></td>
<td>.66**</td>
<td>.48**</td>
<td>.58**</td>
<td>.63**</td>
</tr>
<tr>
<td>5. Body</td>
<td>.45**</td>
<td>.62**</td>
<td>.63**</td>
<td>.65**</td>
<td></td>
<td>.42**</td>
<td>.59**</td>
<td>.58**</td>
</tr>
<tr>
<td>6. Mind</td>
<td>.45**</td>
<td>.48**</td>
<td>.47**</td>
<td>.37**</td>
<td>.31**</td>
<td></td>
<td>.50**</td>
<td>.33**</td>
</tr>
<tr>
<td>7. Soul</td>
<td>.31**</td>
<td>.57**</td>
<td>.55**</td>
<td>.55**</td>
<td>.58**</td>
<td>.30**</td>
<td></td>
<td>.58**</td>
</tr>
<tr>
<td>8. Spirit</td>
<td>.31**</td>
<td>.52**</td>
<td>.58**</td>
<td>.58**</td>
<td>.51**</td>
<td>.32**</td>
<td>.54**</td>
<td></td>
</tr>
</tbody>
</table>

Note:
1. **: p < .01
2. The high level of Confucian knowledge sample (N=180) is presented above the diagonal. The low level of Confucian knowledge sample (N=200) is presented below the diagonal.
3. Correlations highlighted indicated significantly different between the two groups.
Confirmatory factor analyses for the Confucian self-measure. Based on earlier results on the latent variable of the Confucian self, confirmatory factor analysis was run. For the Chinese students with a low level of Confucian knowledge, initial CFA model of the Confucian self (Model 39) appeared to be a poor fitting model, Chi-square $\chi^2 (20, N=200) =70.73, p<.001$, GFI=.92, RMSEA=.11, and Standardized RMR =.051. Respecified solutions were provided and a modified CFA model was produced. Results pointed out Chi-square $\chi^2 (16, N=200)= 29.64, p=.02$, GFI=.96, RMSEA=.065, and Standardized RMR =.036, with no extra modifications needed (Model 40), indicating it was an acceptable model that confirmed relationships among observed variables and psychological construct of the Confucian self.

Chi-Square=70.73, df=20, P-value=0.0000, RMSEA=0.113

Figure 41
Model 39 Original Confirmatory Factor Model of Confucian Self with Single Latent Variable for the Chinese Group with Low Level of Confucian Knowledge
Similarly, for the Chinese cohort with a high level Confucian knowledge, results (Model 41, Figure 43) presented that initial confirmatory factor model of the Confucian self was found to be poor fitting, Chi-square $\chi^2 (20, N=180)=88.18$, with degree freedom of 20, and $p<.001$, GFI=.89, RMSEA=.138, and Standardized RMR =.053. Like the CFA model of the Confucian self for the low level group, suggested model modifications were added to respecify the relationships among observed variables of the Confucian self. Apparently, the modified model (Model 42, Figure 44) was found to be a better fitting one, Chi-square $\chi^2 (17, N=180)=31.46$, $p=.018$, GFI=.96, RMSEA=.069, and Standardized RMR =.035, with no additional modification needed.
Chi-Square=88.18, df=20, P-value=0.0000, RMSEA=0.138

Figure 43
Model 41 Original Confirmatory Factor Model of Confucian Self with Single Latent Variable for the Chinese Group with High Level of Confucian Knowledge

Selected goodness-of-fit indices were presented for comparing the initial model and the modified model of the Confucian self for two groups categorized by extent of
Confucian knowledge in Table 4. Factor loading of each observed variable to the Confucian self were summarized in Table 4 and all loadings were significant at .05 level of significance. The revised confirmatory factor models would be applied to later structural modeling analyses. Such results again confirmed the relationships among observed variables of the Confucian self and the latent variable of the Confucian self. Thus, although Chinese students reported different levels of Confucian knowledge, results still indicated that they did not successfully spell out breadth of the self from depth of the self and tended to regard the Confucian self as one unit.

Table 45
Selected Goodness-of-Fit Indices of Confirmatory Analysis Factor Models for Chinese Student Report of the Confucian Self by Level of Confucian Knowledge

<table>
<thead>
<tr>
<th>Model</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>p value</th>
<th>GFI</th>
<th>RMSEA</th>
<th>Standardized RMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort of low level of Confucian knowledge (N=200)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original Model</td>
<td>70.73</td>
<td>20</td>
<td>&lt;.001</td>
<td>.92</td>
<td>.11</td>
<td>.051</td>
</tr>
<tr>
<td>Modified Model</td>
<td>29.64</td>
<td>16</td>
<td>.02</td>
<td>.96</td>
<td>.065</td>
<td>.036</td>
</tr>
<tr>
<td>Cohort of high level of Confucian knowledge (N=180)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original Model</td>
<td>88.18</td>
<td>20</td>
<td>&lt;.001</td>
<td>.89</td>
<td>.138</td>
<td>.053</td>
</tr>
<tr>
<td>Modified Model</td>
<td>31.46</td>
<td>17</td>
<td>.02</td>
<td>.96</td>
<td>.069</td>
<td>.035</td>
</tr>
</tbody>
</table>

Note: df=degree of freedom.

Confirmatory factor model comparisons indicated that decrease in Chi-squares from Model comparison 1 to Model comparison 2 was found to be significant, \( \chi^2=89.74, \triangle df=4 \), at the .05 level (Table 47), indicating equal factor loadings but different error variances between the low level group and the high level group. In other words, the extents of these variables that correlated with psychological construct of the Confucian self were equivalent, whereas other irrelevant sources of these
variables beyond measurement were different between these two groups.

Table 46
*Standardized Estimates for Single Factor Confirmatory Model of Confucian Self for the Cohort with Low Level of the Confucian Knowledge (N =200) and the Cohort with High Level of Confucian Knowledge (N = 180)*

<table>
<thead>
<tr>
<th>Factor loadings:</th>
<th>Low Level</th>
<th></th>
<th>High Level</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Original Model</td>
<td>Modified Model</td>
<td>Original Model</td>
<td>Modified Model</td>
</tr>
<tr>
<td>Family</td>
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<td>.70*</td>
<td>.69*</td>
<td>.66*</td>
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<tr>
<td>Community</td>
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<tr>
<td>World</td>
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<td>.78*</td>
<td>.79*</td>
<td>.78*</td>
</tr>
<tr>
<td>Body</td>
<td>.76*</td>
<td>.73*</td>
<td>.78*</td>
<td>.78*</td>
</tr>
<tr>
<td>Mind</td>
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<tr>
<td>Spirit</td>
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<td>.68*</td>
<td>.64*</td>
<td>.60*</td>
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</tbody>
</table>

Measurement error variances:

<table>
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<th>High Level</th>
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<tbody>
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<td></td>
<td>Original Model</td>
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<td>.61</td>
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<tr>
<td>Soul</td>
<td>.54</td>
<td>.52</td>
<td>.50</td>
<td>.52</td>
</tr>
<tr>
<td>Spirit</td>
<td>.56</td>
<td>.53</td>
<td>.59</td>
<td>.64</td>
</tr>
</tbody>
</table>

Note: *: p<.05

Table 47
*Model Comparison of CFA Models of the Confucian Self between the Chinese Cohort with Low Level with Confucian Knowledge (N=200) and the Cohort with High Level of Confucian Knowledge (N=180)*

<table>
<thead>
<tr>
<th>Model comparison</th>
<th>Factor loadings</th>
<th>Error variances</th>
<th>Chi-square</th>
<th>df</th>
<th>p value</th>
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<tr>
<td>MC 1</td>
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<td>E</td>
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<tr>
<td>MC 3</td>
<td>U</td>
<td>E</td>
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<tr>
<td>MC 4</td>
<td>U</td>
<td>U</td>
<td>86.08</td>
<td>40</td>
<td>&lt;.01</td>
<td>.078</td>
</tr>
</tbody>
</table>

Note:
1. MC 1= Type of model comparison 1, MC 2= Type of model comparison 2, MC 3= Type of model comparison 3, MC 4= Type of model comparison 4.
2. E=Equal: set invariant path for the two models.
3. U=Unequal: set variant paths for the two models.
4. Chi-square was found to be significant between Model comparison 1 and Model comparison 2, $\Delta \chi^2 = 89.74$, df=4.
5. $\chi^2_{.05}$=9.488, df=4 (according to $\chi^2$ table$^{17}$)

$^{17}$ $\chi^2$ table: See Appendix H.
Moral Judgment

Mean differences on moral judgment development by level of Confucian knowledge. Moral judgment was measured to better understand whether there was a difference between the cohorts with the low level and the high level of Confucian knowledge. As presented in Table 48, overall, the low level cohort received higher Personal Interest scores and P scores yet lower Maintaining Norms scores than their counterpart with high level of Confucian knowledge. Females of the low level of Confucian knowledge obtained higher DIT-2 scores (Personal Interest, Maintaining Norms, P score, and N2 score) than their female peers of the high level of Confucian knowledge. Except the Maintaining Norms scores, males with low level of Confucian knowledge received higher Personal Interest scores, P scores and N2 scores than their male peers with high level of Confucian knowledge. Two-way ANOVA (gender by level of Confucian knowledge) did not found significant interaction effect between these two cohorts across all DIT-2 scores. No significant main effect for level of Confucian knowledge was found. The main effect of gender was only found on the Maintaining Norms scores, $F(1, 375)=4.75, p=.03, \eta^2 = .012$. Thus, it appeared that male students with a high level of Confucian knowledge preferred Maintaining Norms schema when given moral conflict.
Table 4

<table>
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<tr>
<th>Level of Confucian knowledge</th>
<th>PI</th>
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<th>P score</th>
<th>N2 score</th>
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<td>30.45</td>
</tr>
</tbody>
</table>

Note: F=Female, M=Male, T=Total, PI=Personal Interest score, MN=Maintaining Norms scores, P score= Postconventional Thinking score, SD=Standard Deviation.

Moral Behavioral Tendencies and Attitudes toward Behavioral Outcome

Mean differences on the behavioral variables by level of Confucian knowledge. Descriptive analyses of behavioral tendencies and attitudes toward behavioral outcome were summarized in Table 49 for both the low level and the high level cohorts. Results presented that the high level cohort reported higher tendencies to engage in ethical behavioral activity (across all observed variables) than the low level cohort. More specifically, both females and males of the high level of Confucian knowledge received higher scores on ethical behavioral tendencies than their female and male counterparts. For gender difference, except cheating, females with a low level of Confucian knowledge had higher scores than their male peers on social cooperation, stealing, self-serving activities, and aggressive behavior. Within the high level group, females had higher scores than their male counterparts on social cooperation, stealing, and aggressive behavior, while they had lower scores of cheating and self-serving activities than their peers. Two-way ANOVA (gender by level of Confucian knowledge) revealed a significant interaction effect on the aggressive behavior, $F(1,375)=4.90$, $p=.027$, $\eta^2=.013$. Except the self-serving
activity, the main effect for level of Confucian knowledge was found to be significant on behavioral tendencies: social cooperation, $F(1,375)=8.95, p=.003, \eta^2 = .023$, cheating, $F(1,375)=4.27, p=.04, \eta^2 = .011$, stealing, $F(1,375)=14.49, p < .001, \eta^2 = .037$, and overall moral behavioral tendencies, $F(1,375)=8.75, p=.003, \eta^2 = .038$. A significant main effect of gender was found on social cooperation, $F(1,375)=9.48, p=.002, \eta^2 = .025$, stealing, $F(1,375)=14.96, p < .001, \eta^2 = .038$, and overall moral behavioral tendencies, $F(1,375)=9.478, p < .001, \eta^2 = .025$.

Addressing attitudes toward behavioral outcomes, the high level group reported higher scores across all observed variables than the low level group (Table 50), indicating they had less tolerable attitudes toward behavioral misconducts than their peers with low level of Confucian knowledge. Compared to the females of the high level of Confucian knowledge, the females of the low level of Confucian knowledge reported higher scores on attitude toward cheating, stealing, self-serving activity and aggressive behavior, except score of social cooperation. Males of the low level of Confucian knowledge had lower scores than the males of the high level Confucian knowledge across all observed variables of attitudes toward behavioral outcomes. Interestingly, the female students of the low level group reported higher scores across observed variables on attitudes toward behavioral outcomes than their male peers, whereas the females of the high level group reported lower scores on all measured variables of attitudes toward behavioral outcomes than their male counterparts. Two-Way ANOVA (gender by level of Confucian knowledge) revealed that such difference was significant across all observed variables on attitudes toward behavioral outcomes, attitude toward social cooperation, $F(1,375)=12.45, p < .001, \eta^2 = .032$, attitude toward cheating, $F(1,375)=10.96, p = .001, \eta^2 = .028$, attitude toward stealing, $F(1,375)=9.15, p = .003, \eta^2 = .024$, attitude toward self-serving purpose,
\( F(1,375) = 8.26, \ p = .004, \ \eta^2 = .022, \) attitude toward aggressive behavior,

\( F(1,375) = 13.41, \ p < .001, \ \eta^2 = .035, \) and total score of attitudes toward behavioral outcomes, \( F(1,375) = 15.94, \ p < .001, \ \eta^2 = .041. \)
### Table 49
Mean and Standard Deviation of Moral Behavioral Tendencies by Level of Confucian Knowledge and Gender

<table>
<thead>
<tr>
<th>Level of Confucian Knowledge</th>
<th>G</th>
<th>N</th>
<th>SC Mean</th>
<th>SD</th>
<th>CT Mean</th>
<th>SD</th>
<th>ST Mean</th>
<th>SD</th>
<th>SS Mean</th>
<th>SD</th>
<th>AB Mean</th>
<th>SD</th>
<th>MB Mean</th>
<th>SD</th>
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</thead>
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<td>1.58</td>
<td>19.38</td>
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</tr>
</tbody>
</table>

Note: G=Gender, F=Female, M=Male, T=Total, N=Number, SC=Social cooperation, CT=Cheating, ST=Stealing, AB=Aggressive behavior, MB=Moral behavioral tendencies, SD=Standard Deviation. The higher score, the higher ethical behavior tendencies.

### Table 50
Mean and Standard Deviation of Attitudes toward Behavioral Outcomes by Confucian Knowledge and Gender

<table>
<thead>
<tr>
<th>Level of Confucian Knowledge</th>
<th>G</th>
<th>N</th>
<th>SC Mean</th>
<th>SD</th>
<th>CT Mean</th>
<th>SD</th>
<th>ST Mean</th>
<th>SD</th>
<th>SS Mean</th>
<th>SD</th>
<th>AB Mean</th>
<th>SD</th>
<th>BO Mean</th>
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Note: G=Gender, F=Female, M=Male, T=Total, N=Number, SC=Social cooperation, CT=Cheating, ST=Stealing, AB=Aggressive behavior, BO=Behavioral Outcomes, SD=Standard Deviation. The higher score, the less acceptable attitudes toward behavioral outcomes.
Correlations between behavioral subscales by level of Confucian knowledge.

Correlations among observed variables of behavioral tendencies and attitudes toward behavioral conducts (Table 51) were calculated. Generally, results showed that the low level group and the high level group shared a similar pattern of correlations among observed variables of behavioral tendencies and attitudes toward behavioral outcomes. For instance, correlations among variables of behavioral tendencies were found to be from low to medium, and correlations among variables of attitudes toward behavioral outcomes were found to be medium, which were at the .05 level of significance. Some correlations among variables of behavioral tendencies and attitudes toward behavioral outcome ranged from low to medium, at the .05 significant level. However, some of correlations were small, indicating weak correlations between attitudes and behavioral outcomes. Results of comparisons between these two samples indicated that there were significant differences on correlations between social cooperation and cheating, $Z=2.41$, $p=.02$, social cooperation and aggressive behavior, $Z=3.45$, $p<.01$, stealing and aggressive behavior, $Z=2.95$, $p<.01$, and attitude toward stealing and attitude toward aggressive behavior, $Z=2.17$, $p=.03$, suggesting these two samples equivalently defined the relationships among observed variables of moral behavioral tendencies and attitudes toward behavioral outcomes, with the exception for those associations between social cooperation and cheating, social cooperation and aggressive behavior, and attitude toward stealing and attitude toward aggressive behavior.
Table 51
*Correlations among Indicators of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes by Level of Confucian Knowledge*

<table>
<thead>
<tr>
<th>Variables</th>
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<th>St</th>
<th>ss</th>
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<td>.49**</td>
<td>.68**</td>
<td>.61**</td>
<td>—</td>
</tr>
</tbody>
</table>

Note:
1. sc = social cooperation; ct = cheating; st = stealing; ss = self-serving orientation; ab = aggressive behavior; a_sc = attitude toward social cooperation; a_ct = attitude toward cheating; a_st = attitude toward stealing; a_ss = attitude toward self-serving orientation; a_ab = attitude toward aggressive behavior.
2. *: p < .05; **: p < .01
3. High level of Confucian knowledge sample (N=180) is presented above the diagonal. Low level of Confucian knowledge sample (N=200) is presented below the diagonal.
4. Correlations highlighted with the same color indicate significant Z-value (p<.05) between the two cohorts categorized by level of Confucian knowledge, suggesting significantly different correlations between the two variables for the two cohorts.
Confirmatory factor analyses for the behavioral measures by level of

Confucian knowledge. Confirmatory factor analysis was conducted to identify relationships among observed variables of behavioral tendencies and attitudes toward behavioral outcomes for two of these cohorts. For the low level group, results of an initial CFA model (Model 43) for the behaviors and the attitudes presented selected model-fit indices, such as Chi-square $\chi^2 (34, N=200) = 241.90$, $p < .001$, GFI = .80, RMSEA = .175, and Standardized RMR = .078, and indicated further model modifications were needed in order to reproduce a better fitting model (Model 43, Figure 45). Accordingly, correlations among observed variables were respecified and results stated that Chi-square was $\chi^2 (28, N=200) = 62.02$, $p < .001$, GFI = .94, RMSEA = .078, and Standardized RMR = .056, with no extra model modifications suggested (Model 44, Figure 46). Although not all of model-fit indices were good, it was still an acceptable model, when compared to the initial one.

Chi-Square=241.90, df=34, P-value=0.000, RMSEA=0.175

Figure 45

Model 43 Original Confirmatory Factor Model of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Group with Low Level of Confucian Knowledge
Figure 46
Model 44 Modified Confirmatory Factor Model of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Group with Low Level of Confucian Knowledge

For the high level group, results of confirmatory factor Model 45 (Figure 47) portrayed model-fit indices, including Chi-square $\chi^2$ (34, N=180)=191.60, $p<.001$, GFI=.82, RMSEA=.161, and Standardized RMR =.079. Clearly, this confirmatory factor model was not well fit. Accordingly, a modified model was reproduced with model modifications were indicated. The modified model (Model 46, Figure 48) provided Chi-square $\chi^2$ (27, N=180)=33.87, $p=.17$, GFI=.96, RMSEA=.038, and Standardized RMR =.048, with extra model modifications were suggested. Using the cut-off rules, we would safely confirm the Model 46 was the final best fitting model that determined relationships among observed variables of behavioral tendencies and attitudes toward these behavioral outcomes for the high level sample. Selected model-fit indices were presented in Table 52 and factor loadings were summarized in Table 53 for both the Chinese cohorts by their level of Confucian knowledge.
Model 45 Original Confirmatory Factor Model of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Group with High Level of Confucian Knowledge

Model 46 Modified Confirmatory Factor Model of Moral Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Group with High Level of Confucian Knowledge
The CFA model comparisons of moral outcome indicated that the change in
Chi-squares from Model comparison 1 to Model comparison 4 was found to be
significant, $\Delta \chi^2 = 82.46$, $\Delta df = 17$, at the .05 level (Table 54), which denoted that
invariant factor loadings and distinct error variances covariances between the low
level and high level cohorts. Put another way, the degree to which observed variables
of behavioral tendencies and attitudes toward behavioral outcomes differently
correlated with each construct of the moral outcome and other extraneous causes that
contributed to the observed variables of the moral outcome differed between these
two cohorts categorized by students’ level of Confucian knowledge. Thus, moral
outcomes (moral behavioral tendencies and attitudes toward behavioral outcomes)
were discretely represented by different groups.
Table 53
Standardized Estimates for Factor Confirmatory of Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Chinese Groups by Level of Confucian Knowledge

<table>
<thead>
<tr>
<th>Level of Confucian knowledge</th>
<th>Low level (N=200)</th>
<th>High level (N=180)</th>
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</thead>
<tbody>
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<td>Original model</td>
<td>Modified model</td>
</tr>
<tr>
<td>Factor loadings:</td>
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<tr>
<td>Social cooperation</td>
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<tr>
<td>Aggressive behavior</td>
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<td>.64</td>
</tr>
<tr>
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<td>.80</td>
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<tr>
<td>A_Aggressive behavior</td>
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<td>A_Stealing</td>
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<td>.23</td>
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<td>A_Self-serving</td>
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<td>.36</td>
</tr>
<tr>
<td>A_Aggressive behavior</td>
<td>.39</td>
<td>.46</td>
</tr>
</tbody>
</table>

Note:
1. A_Social cooperation = Attitude toward social cooperation, A_Cheating = Attitude toward cheating, A_Stealing = Attitude toward stealing, A_Self-serving = Attitude toward self-serving activity, A_Aggressive behavior = Attitude toward aggressive behavior.
2. All factor loadings were significant at .05 level.
### Table 54

**Model Comparison of CFA Models of Behavioral Variables between the Chinese Cohort with Low Level of Confucian Knowledge (N=200) and the Chinese Cohort of High Level of Confucian Knowledge (N=180)**

<table>
<thead>
<tr>
<th>Model comparison</th>
<th>Factor loadings</th>
<th>Error variances</th>
<th>$\Delta \chi^2$</th>
<th>$\Delta df$</th>
<th>$\Delta \chi^2_{1}$</th>
<th>$\Delta df_{1}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC 1</td>
<td>E</td>
<td>E</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MC 2</td>
<td>E</td>
<td>U</td>
<td>48.02*</td>
<td>7</td>
<td>34.44*</td>
<td>10</td>
</tr>
<tr>
<td>MC 3</td>
<td>U</td>
<td>E</td>
<td>32.25*</td>
<td>10</td>
<td>50.21*</td>
<td>7</td>
</tr>
<tr>
<td>MC 4</td>
<td>U</td>
<td>U</td>
<td>82.46*</td>
<td>17</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Note:**
1. MC 1= Type of model comparison 1, MC 2= Type of model comparison 2, MC 3= Type of model comparison 3, MC 4= Type of model comparison 4.
2. E=Equal: set invariant path for the two models.
3. U=Unequal: set variant paths for the two models.
4. $\Delta \chi^2$: indicates decrease in Chi-square from MC1 to other type of model comparison
5. $\Delta df$: indicates difference in degree of freedom between MC1 and other type of model comparison
6. $\Delta \chi^2_{1}$: indicates decrease in Chi-square of MC4 from MC2 or MC3
7. $\Delta df_{1}$: indicates difference in degree of freedom between MC4 and MC2 or MC3
8. $\chi^2_{.05}=14.067$, $df=7$; $\chi^2_{.05}=18.307$, $df=10$; $\chi^2_{.05}=27.587$, $df=17$ (according to $\chi^2$ table^{18}).
9. *: indicates a significant change between two types of model comparison.

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**Structural Equation Modeling Models among the Confucian Self, Moral Judgment, Behavioral Tendencies, and Attitudes toward Behavioral Outcomes for Chinese Samples by Level of Confucian Knowledge**

**Relationships among the Confucian self, behavioral tendencies, and attitudes toward behavioral conducts.** Like exploring the predictive relationships among the Confucian self, behavioral tendencies and attitudes toward behavioral outcomes in earlier sections, SEM models were run as well to better understand the associations among these latent variables of interest for the Chinese cohorts categorized by level of Confucian knowledge. For the low level group, results (Model 47) indicated that chi-square was $\chi^2 (122, N=200) =182.91, p<.001$, with RMSEA = .05, GFI = .91, and Standardized RMR = .056 (Figure 49). Although not all model-fit indices reached the cut-off criteria, it was still an acceptable model. In this model, the Confucian self did

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^{18} $\chi^2$ table: See the Appendix H.
not significantly predict behavioral tendencies or the attitudes. Only attitudes toward behavioral outcomes significantly predicted behavioral tendencies, $T=4.04$, at the .05 level of significance.

Figure 49

Model 47 SEM Model of the Confucian Self and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Group with Low Level of Confucian Knowledge
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

For the high level group, selected model-fit indices suggested the SEM model was also an acceptable one (Model 48, Figure 50), including Chi-square $\chi^2$ (122, $N=180)=173.77, p<.01$, RMSEA=.049, GFI=.90, and Standardized RMR=0.067, without further modifications needed. Within this model, the Confucian self did not significantly predict behavioral tendencies, but significantly predicted attitudes toward behavioral outcomes, $T=2.90$, at the .05 level of significance. Like its role in behavioral tendencies for other study groups earlier, attitudes toward behavioral outcomes still played a significant role in predicting behavioral tendencies, $T=4.39$, at the .05 level of significance.
The results of SEM model comparison indicated that there was no significant difference between the low level and the high level cohorts with regard to the predictive relationships between attitudes toward behavioral outcomes with behavioral tendencies, $\Delta \chi^2=1.27$, $\Delta df=1$ ($\chi^2=3.841$, $df=1$, at the .05 level of significance). In short, the Confucian self significantly predicted attitudes toward behavioral outcomes for the high level group, while it did not for the low level group.

Chi-Square=173.77, df=122, P-value=0.00146, RMSEA=0.049

Figure 50 Model 48 SEM Model of the Confucian Self and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Group with High Level of Confucian Knowledge
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

Relationships among moral judgment, behavioral tendencies, and attitudes toward behavioral conducts. Moral judgment was another factor of interest and SEM models were produced to establish its relationships with behavioral tendencies and attitudes toward behavioral outcomes. For the low level group, the results indicated Chi-square was $\chi^2$ (36, N=200) =80.47, $p < .001$, with RMSEA =.079, GFI =.93, and Standardized RMR = .058. Although some of selected model-fit indices did
not meet the cut-off criteria, it was still an acceptable one that determined associations among moral judgment, behavioral tendencies, and attitudes toward behavioral outcomes (Model 49, Figure 51). It was found that moral judgment did not significantly predict moral behavioral tendencies or attitudes toward behavioral outcomes. Only attitudes toward behavioral conducts was found to significantly predict moral tendencies, $T=4.08, p<.05$. It was not a surprising finding, which was consistent with early findings for the Chinese as a whole and the Chinese cohorts categorized by regions.

![Diagram](image.png)

Chi-Square=80.47, df=36, P-value=0.0003, RMSEA=0.079

Figure 51
Model 49 SEM Model of Moral Judgment and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Group with Low Level of Confucian Knowledge

Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

For the high level group, the results of selected model-fit indices presented

Chi-square was $\chi^2 (35, N=180)=41.72, p=.20$, with RMSEA = .033, GFI = .96, and Standardized RMR=.047, which revealed the SEM model was a good one that identified associations among moral judgment, behavioral tendencies, and attitudes.
toward behavioral outcomes for Chinese cohort with the high level of Confucian knowledge (Model 50, Figure 52). Consistent with the role of the Confucian self in attitudes toward behavioral outcomes, results indicated that moral judgment only significantly predicted attitudes toward behavioral outcomes, $T = -2.02, p < .05$, in a negative way. The higher N2 score one received; the lower score of attitudes toward behavioral misconducts one had. That is, the higher postconventional thinking score one had, the less acceptable attitudes one held toward behavioral misconducts. This finding for the high level group was different from that for the low level group. Moral judgment did not significantly predict behavioral tendencies. Attitudes toward behavioral outcomes significantly predicted behavioral tendencies, $T = 4.57, p < .05$.

Model comparison was conducted to understand whether the roles of attitudes toward behavioral outcomes differed in predicting behavioral tendencies between the
low level and the high level cohorts. Results indicated that decrease in Chi-squares was $\Delta \chi^2 = 1.06, \Delta df = 1$ ($\chi^2 = 3.841, df = 1$, at the .05 level of significance), indicating the effect of the attitudes did not vary on the behavioral tendencies between these two samples. Thus, the main difference of SEM models was that moral judgment significantly predicted attitudes toward behavioral outcomes for the high level cohort, but not for the low level cohort.

Relationships among the Confucian self, moral judgment, and behavioral tendencies, and attitudes toward behavioral outcomes. For the low level group, all observed variables were used to establish relationships among the latent variables of interests. Results stated that Chi-square was $\chi^2 (137, N=200) = 205.89, p < .001$, with RMSEA = .050, GFI = .90, and Standardized RMR = .057 (Model 51), indicating it was an acceptable model. Neither Confucian self nor moral judgment was found to significantly predict moral behavioral tendencies or attitudes toward behavioral outcomes, which was consistent with earlier findings (Model 47 & Model 49). Only attitudes toward behavioral outcomes significantly predicted behavioral tendencies, $T = 4.04$, at the .05 level of significance.
Chi-Square=205.89, df=137, P-value=0.00013, RMSEA=0.050

Figure 53
Model 51 SEM Model of the Confucian Self, Moral Judgment, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Group with Low Level of Confucian Knowledge
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

For the high level group, model-fit indices were found to be Chi-square $\chi^2$ (137, N=180) = 194.76, $p<.001$, RMSEA =.049, GFI = .90, and Standardized RMR =.057 (Model 52). It could be an acceptable model that portrayed relationships among the Confucian self, moral judgment, and behavioral tendencies and attitudes toward behavioral outcomes, though some of indices did not meet the cut-off criteria. Identical with earlier results (Model 48 & Model 50), moral judgment and the Confucian self significantly predicted attitudes toward behavioral outcomes, $T=-2.09$, and $T=2.95$, $p<.05$, respectively, and attitudes toward behavioral outcomes also significantly contributed to moral behavioral tendencies, $T=2.68$, at the .05 level of significance. Neither moral judgment nor the Confucian self significantly predicted moral behavioral tendencies.
Chi-Square=194.76, df=137, P-value=0.00087, RMSEA=0.049

Figure 54
Model 52 SEM Model of the Confucian Self, Moral Judgment, and Behavioral Tendencies and Attitudes toward Behavioral Outcomes for the Group with High Level of Confucian Knowledge
Note: Bold paths are significant. Observed variables included in models are significant to latent constructs.

When comparing the Model 51 and the Model 52, results indicated there was no significant difference of effects of attitudes toward behavioral outcomes on behavioral tendencies between the low level and the high level cohorts, $\Delta \chi^2 = .66, \Delta df=1$ ($\chi^2=3.841, df=1$, at the .05 level of significance). As such, the main differences between these two groups resided in that both moral judgment and the Confucian self significantly indicated attitudes toward behavioral outcomes for the cohort with a high level of Confucian knowledge but not for the cohort with a low level of Confucian knowledge. Neither the Confucian self nor moral judgment was crucial in predicting behavioral tendencies. The role of attitudes toward behavioral outcomes did not differ between these two cohorts.