

12-6-2013

Investigating the Relation between Moral Self-Enhancement and Self-Deception: A Cross-Cultural Study of U.S. and Chinese College Students

Ying Liu

University of Missouri-St. Louis

Follow this and additional works at: <https://irl.umsl.edu/dissertation>



Part of the [Education Commons](#)

Recommended Citation

Liu, Ying, "Investigating the Relation between Moral Self-Enhancement and Self-Deception: A Cross-Cultural Study of U.S. and Chinese College Students" (2013). *Dissertations*. 279.

<https://irl.umsl.edu/dissertation/279>

This Dissertation is brought to you for free and open access by the UMSL Graduate Works at IRL @ UMSL. It has been accepted for inclusion in Dissertations by an authorized administrator of IRL @ UMSL. For more information, please contact marvinh@umsl.edu.

Investigating the Relation between Moral Self-Enhancement and Self-Deception: A
Cross-Cultural Study of U.S. and Chinese College Students

by

YING LIU

M.Ed., Elementary Education, University of Missouri – St. Louis, 2007
B.A., English Language and Literature, Central China Normal University, 2004

A DISSERTATION

Submitted to the Graduate School of the University of Missouri – St. Louis
in Partial Fulfillment of the Requirements for the Degree

Doctor of Philosophy in Education

October 2012

Advisory Committee

Matthew Keefer, Ph.D. (Advisor)

Cody Ding, Ph.D.

Lisa Dorner, Ph.D.

Joseph Polman, Ph.D.

ACKNOWLEDGEMENTS

This dissertation is one of the most significant achievements I have made in my academic career. I could not have come this far without the support and assistance I've received at the College of Education, University of Missouri-St. Louis.

I would like to express my deepest gratitude to my advisor, Dr. Matthew Keefer, for his guidance, encouragement and enthusiasm along the way. Without his belief in me I could not have dared to explore new ideas in the study and developed confidence in my own ability as a qualified researcher. My committee members, Dr. Cody Ding, Dr. Lisa Dorner and Dr. Joseph Polman, have contributed immensely to the successful completion of this work. I want to thank Dr. Ding for his help in research methodology and statistical analyses. I appreciate Dr. Dorner's contribution of her knowledge and expertise in cross-cultural research. I am also grateful to Dr. Polman for his insightful comments and critiques on the manuscript, which made the final work a much stronger piece.

My gratitude also goes to the following wonderful people who assisted me with data collection. The dissertation could not have been possible without their time and help: Dr. Cody Ding, Dr. Lisa Dorner, Dr. Virginia Navarro, Dr. Alina Slapac, Dr. Amy Ruffus Doerr, Mr. Val Turner, Dr. Carolyn Brown, Ms. Linda Francois, Mr. Richard Navarro, Ms. Jill Johnson, Mr. Rudolf Vrugtman, and Ms. Wei Zhao.

Lastly, I would like to thank my family for their unconditional love, patience and support: Qiang, Delancey, and Zufen.

ABSTRACT

Testing an evolutionary framework, this study examined moral self-enhancement in relation to self-deception and self-construal in a cross-cultural context. The participants included 127 U.S. and 107 Chinese college students. The results demonstrated that moral self-enhancement is not a characteristic unique to individualistic ideology but rather a universal motivation. Regardless of their cultural groups and self-construal, participants tended to morally self-enhance, rating their own character and sense of responsibility significantly higher than those of other people. In addition, U.S. participants were more likely to morally self-enhance compared to their Chinese counterparts. At the individual level, strong independents demonstrated greater moral self-enhancement than did their strong interdependent peers among the U.S. participants, whereas greater moral self-enhancement was observed in strong interdependents but not strong independent in the Chinese sample. As hypothesized, self-deception as measured by *self-deceptive enhancement* (SDE) but not *impression management* (IM) stood out as a significant predictor of moral self-enhancement, supporting the evolutionary understanding that moral self-enhancement is an unconscious process intimately related to self-deception. Among Chinese participants, the association between moral self-enhancement and self-deception was found to be mediated through an inflated rating of others, which indicated a potential other-enhancement effect. On the one hand, results of this study regarding cultural differences in the demonstration of moral self-enhancement were in line with extant self-enhancement literature. On the other hand, the significant relationship between moral self-enhancement and self-deception as revealed in the study provided evidence against the claim that culture is the primary explanation for self-

enhancement. Moral self-enhancement as a psychological adaptation to cooperation in the social environment has an evolutionary root. Findings of the study also suggested challenges facing current moral education practices.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	II
ABSTRACT.....	III
LIST OF TABLES.....	VII
LIST OF FIGURES	VIII
CHAPTER I: INTRODUCTION	1
SELF-ENHANCEMENT.....	2
SELF-DECEPTION	3
VIEWING SELF-ENHANCEMENT AND SELF-DECEPTION THROUGH AN EVOLUTIONARY PSYCHOLOGY LENS.....	5
SELF-ENHANCEMENT AND SELF-DECEPTION IN CULTURAL CONTEXTS.....	6
SIGNIFICANCE OF THE STUDY	9
CHAPTER II: LITERATURE REVIEW	10
UNDERSTANDING SELF-ENHANCEMENT	10
Self-Enhancement in General	10
Moral Self-Enhancement	12
SELF-DECEPTION	13
The Notion of Self-Deception.....	13
Self-Deception as a Fitness-Enhancing Strategy	14
LINKING SELF-DECEPTION TO SELF-ENHANCEMENT	16
EXAMINING SELF-ENHANCEMENT AND SELF-DECEPTION IN CULTURAL CONTEXTS	20
Defining Cultural Differences.....	20
Is the Motivation to Self-Enhance Universal?	22
Self-Deception in Cultural Contexts	25
PURPOSE OF THE STUDY.....	27
HYPOTHESES DEVELOPMENT.....	27
CHAPTER III: METHODOLOGY.....	30
SAMPLE.....	30
PROCEDURES	30
MEASURES.....	31
STATISTICAL ANALYSIS	35
CHAPTER IV: RESULTS.....	36
SAMPLE CHARACTERISTICS	36
DATA ANALYSES	37
Data Screening.....	37
Reliabilities of Measures.....	37
Correlations between Measures	39
Hypothesis 1.....	41
Hypothesis 2.....	44
Hypotheses 3 & 4.....	46
Hypothesis 5.....	48

CHAPTER V: DISCUSSION	55
THE CULTURAL UNDERSTANDING OF MORAL SELF-ENHANCEMENT	55
THE EVOLUTIONARY UNDERSTANDING OF MORAL SELF-ENHANCEMENT	56
SELF-DECEPTION AND MORAL SELF-ENHANCEMENT	59
SELF-CONSTRUAL, SELF-DECEPTION AND MORAL SELF-ENHANCEMENT	62
CHALLENGES FOR MORAL EDUCATION	63
LIMITATIONS OF THE STUDY	64
CONCLUSION.....	65
REFERENCES.....	68
APPENDIX A: MORAL SELF-ENHANCEMENT SCALE.....	82
APPENDIX B: SELF-CONSTRUAL SCALE.....	83
APPENDIX C: THE BALANCED INVENTORY OF DESIRABLE RESPONDING	84

LIST OF TABLES

Table	Page
1. Demographic Characteristics of Participants	37
2. Cronbach's Alpha Reliabilities	38
3. Descriptive Statistics of Moral Self-Enhancement, Self-Construal, and Self-Deception by Cultural Group	39
4. Correlations among Measures of Moral Self-Enhancement, Self-Construal and Self-Deception by Cultural Group	41
5. Mean Comparison of Rating of Self and Rating of Others by Cultural Group and Self-Construal	43
6. Multiple Regression of Self-Deception on Moral Self-Enhancement	44
7. Multiple Regression of Self-Deception with Interaction Term on Moral Self-Enhancement	45
8. Means and Standard Deviations for U.S. Participants	47
9. Means and Standard Deviations for Chinese participants	48
10. Summary of Multiple Regression Analyses on Moral Self-Enhancement for U.S. Participants	49
11. Summary of Multiple Regression Analyses on Moral Self-Enhancement for Chinese Participants	50
12. Multiple Regression of Self-Deception and Self-Construal on Rating of Self for Chinese Participants	51
13. Mediation Analysis of Rating of Self, SDE and Rating of Others for Chinese Participants	54

LIST OF FIGURES

Figure	Page
1. Influence of SDE on Moral Self-Enhancement for U.S. and Chinese Participants	46
2. Rating of Others as Mediator in the Relationship between Rating of Self and Self-Deception for Chinese Participants	53

CHAPTER I: INTRODUCTION

The motivation to enhance one's self-image, which is conventionally labeled as self-enhancement, has been among the most actively researched topics in social and personality psychology (Alicke & Sedikides, 2010). Self-enhancement portrays a tendency of people to "construe or remember events in a way that places their attributes in the most favorable light that is credible to oneself and others" (Alicke & Sedikides, 2009, p. 2). Self-evaluation is thus viewed as inherently biased, in a self-serving manner. Self-deception, which is sometimes considered an obstacle to self-knowledge, depicts the situation in which individuals handle paradoxical information about themselves (Greenwald, 1997). Researchers have affirmed that self-enhancement and self-deception permeates in human behavior and both have captured great interest. While some studies appear to suggest self-enhancement is an active demonstration of self-deception, most other studies treat the two as unrelated entities. An interpretation of evolutionary theory will shed new light on our understanding of the relationship between them. Building upon past and contemporary research findings on self-enhancement and self-deception, the present study serves as an attempt to understand how in nature the two constructs correlate with one another and how the relationship is influenced by different cultural orientations.

The moral education of children is a matter of deep concern to everyone from parents to society as a whole. Systematic research on moral development has been going on for decades and shedding important light on moral education practices. While current moral education practices have made progress in promoting core values, developing intrinsic motivation, and providing opportunities for moral action, a key question lingers:

why do people present themselves as more moral than they are? By considering moral self-enhancement, self-deception and the relation between the two within the framework of evolutionary psychology, this study calls attention to the challenge facing moral education.

Self-Enhancement

Self-enhancement takes on different forms. Literature has documented what is termed unrealistic optimism – the bias to overestimate one’s chances of experiencing positive events and to underestimate one’s risk for experiencing negative events (Hoorens & Buunk, 1993; Weinstein, 1980; Weinstein & Klein, 1995); and illusion of control, which refers to an expectancy of a personal success probability that is inappropriately higher than is objectively warranted (Langer, 1975; Jenkins & Ward, 1965).

The above-average effect, which is also commonly known as *better-than-average effect*, is considered one of the most pervasive of all self-enhancement phenomena and one of the most reliable findings (Alicke & Govorun, 2005). It is suggested that people in general have a proclivity for assessing themselves more favorably than the average peer (Freedman, 1978; Perloff & Fetzer, 1986). A similar self-serving pattern has been observed in children, too. For example, in a study of how children make attributions for behavior, children in both younger (5-7 years) and older (8-11 years) age groups made more internal attributions in explaining negative events if they responded as a hypothetical other child, as compared to responding as themselves (Johnston & Lee, 2005).

Morality, of particular interest to the present study, is an area in which people are usually inclined to exaggerate in comparison with peers. Research has found the above-

average effect to be larger on such subjectively construed dimensions as morality than on objectively measured dimensions like intellect (Allison, Messick, & Goethals, 1989), as morality is more desirable, controllable and less verifiable compared to intelligence, which permits greater subjectivity for self-serving biases to occur. For example, researchers have found participants to consistently overestimate the likelihood that they would act altruistically and tend to base their self-relevant predictions on the more subjective case-based information rather than the more objective, accurate distributional information (Epley & Dunning, 2000). Related research also suggested that people tend to underestimate how often others respond generously to request for help (Flynn & Lake, 2008) and overestimate how much others' attitudes and actions are driven by selfish concerns (Miller, 1999). Additional evidence from moral hypocrisy research suggested that people tend to appear to be moral without actually being moral (Batson & Collins, 2011; Batson, Kobrynowicz, Dinnerstein, Kampf, & Wilson, 1997). For the purpose of the present study, self-enhancement, particularly its manifestation in the moral domain, will be discussed and examined in terms of a social comparison between moral self-perceptions and the other-relevant moral-perceptions; moral self-enhancers are individuals who perceive themselves more morally competent than they perceive others.

Self-Deception

Self-deception is described as a puzzling situation in which a person manages to convince himself of the negation of a truth so that the person does not reveal any signs of deception when the person tries to convince others of the negation of the truth.

Philosophers consider self-deception a paradoxical condition of knowledge, as they question how a knowledge system manages to accommodate an obvious internal

contradiction, i.e., the truth and the negation (Mele, 1997). For clinical psychologists and psychiatrists, self-deception is employed as a defensive protection from painful knowledge, which poses challenges to clinical therapeutic practices (Sackeim & Gur, 1978; Schafer, 1976). In the field of psychology, cognitive psychologists attend more closely to the underlying mechanism and functionality of self-deception (Paulhus & John, 1998; Tenbrunsel & Messick, 2004; Greve & Wentura, 2010).

Different from their philosopher and mainstream psychologist counterparts, evolutionary psychologists view self-deception as a psychological adaptation to the environment and a fitness-enhancing strategy (Trivers, 1976). Evolutionary theory holds that it is the “selfish genes” that are responsible for the pre-wiring in all organisms (Dawkins, 1976); that is, through natural selection an organism evolves to wire the brain so as to strategically maximize its reproductive success. Deception therefore has evolved as a fundamental aspect of human social interaction. Research has shown that on average, people lie twice per day (DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996), with common motives ranging from altruism, impression management, to the pursuit of material gain or personal convenience (DePaulo & Kashy, 1998).

Since deceit can be selectively advantageous, there also exists a strong selection for the ability to recognize when deception occurs. Laboratory findings have testified to the fact that acting deceptively can be detected by at least four general categories of cues: nervousness, physical indicators of the act of suppression, extra cognitive load in working memory, and idiosyncratic signs of nervousness, suppression, and cognitive load (von Hippel & Trivers, 2011). As evolutionary biologist Robert Trivers (1976; 2000) famously proposed, self-deception as a result evolves to allow deceivers to circumvent

detection efforts. By deceiving oneself, a person is able to hide the signs of deception, appear to be telling the truth, and therefore deceive others far more effectively.

Viewing Self-Enhancement and Self-Deception through an Evolutionary Psychology Lens

A survey of self-enhancement literature has shown that self-enhancement is biased for good reasons. For example, early studies advocating a cognitive explanation emphasize information-processing strategies as a leading cause of self-serving bias. A person may selectively search for positive information that favors the self, attend to aspects of the available information preferred to be true, or recall more positive than negative information about the self (e.g., Skowronski, Betz, Thompson, & Shannon, 1991; D'Argembeau & Van der Linden, 2008). For example, in an earlier study it was revealed that pleasant events were better recalled than unpleasant events (Skowronski, Betz, Thompson, & Shannon, 1991). Researchers in a more recent study found that people recall their own good behavior much better than bad behavior; however, such bias in recollection is not applied to their recall of other people's behavior (D'Argembeau & Van der Linden, 2008). It was suggested that the motivation to bolster people's self-image would cause a person to talk to others more frequently about positive events in their lives. While it was not explicitly discussed in these studies, one can reasonably argue that self-deception was engaged and played a somewhat important role in the formation of self-serving bias. Whatever the information-processing strategy is, selective search for positive over negative information, biased interpretation of attitude-consistent or attitude-inconsistent information, or misremembering, self-deception enables people to

obscure the true and convince themselves that a falsehood is true (von Hippel & Trivers, 2011).

Taking an evolutionary understanding of human nature may provide important insights on an understanding of the role self-deception plays in self-enhancement. Evolutionary theory suggests the selective advantage of being altruistic and cooperative as well as being “selfish”. As the theory of reciprocal altruism (Trivers, 1971) states, the helping behavior of an organism may reduce the helper’s fitness temporarily, but in the long run the cost of help will pay off with potential returned benefit from the beneficiary. By analyzing winning strategies used in evolutionary “games”, such as Prisoner’s Dilemma, Axelrod (1984) made interesting discoveries about the nature of cooperation and found being nice (i.e., cooperate and never be the first to lie) to be one of the best strategies. In reality, however, succeeding in the game does not have to be costly, i.e., being actually altruistic with conscious intention of helping another. As will be discussed in more detail below, it is thus posited that self-enhancement in nature may serve the goal of obtaining the benefits of altruism by allowing people to advertise themselves as a better cooperator (e.g., being more loyal, more generous, more trustworthy, etc.) than they actually are. And self-deception facilitates self-enhancing motive by enabling a person to mask the cues that might reveal deceptive intent.

Self-Enhancement and Self-Deception in Cultural Contexts

Cultures can be distinguished in several ways, and one of the most commonly discussed cultural variability in cross-cultural research is collectivism and individualism (Triandis 1995). Western cultures, such as those of the U.S. and Western Europe, are typically labeled as individualistic cultures, given their emphasis on the self and viewing

the self as independent of in-groups (Chang, 2008; Greenwald, 1980). Countries such as China, Korea and Japan, are conventionally categorized as collectivist cultures, which stress the priority of group goals over individual goals and the importance of harmony within social groups. Cultural difference at the individual level is described in terms of two distinct ways in which individuals view themselves in relation to others, namely, *independent self-construal* and *interdependent self-construal* (Markus & Kitayama, 1991). Independent self-construal, which tends to be dominant in individualist cultures, defines an individual in terms of autonomy, agency and separation from their social contexts. In contrast, members of collectivist cultures tend to endorse an interdependent self-construal, which underscores an individual's embeddedness in social relationships (Markus & Kitayama, 1991; Triandis, 1989).

The inquiry into the association between culture and self-enhancement has led to a growing number of studies and even protracted debate. Considering the sharp contrasts between the two cultural orientations, both at the cultural level and the individual level, it may sound reasonable to suggest that self-enhancement is prevalent only in individualist cultures, as self-enhancement is believed to allow members of these cultures to maintain and support the independent self (Heine, Lehman, Markus, & Kitayama, 1999; Heine, 2003, 2005). Within collectivist cultures, self-criticism, rather than self-enhancement is advocated, as it represents a self-evaluative style by which the interdependent self is supported (Heine, Takata, & Lehman, 2000). Findings of some studies on the "holier than thou" effect further suggested that compared to their individualist peers, collectivists are less inclined to overestimate the qualities of themselves and actually make more accurate self-predictions of future behavior (Balcetis, Dunning, & Miller, 2008).

Some researchers, however, contend that the people in all cultures are motivated to maintain a positive self-view (Fiske & Taylor, 1984; Greenwald, 1980; Sedikides, Gaertner, & Toguchi, 2003). It is only that members of different cultural groups self-enhance on personally important dimensions, i.e., people with an independent self-construal view themselves as excelling in individualist attributes, whereas those with an interdependent self-construal have an inflated view of their collectivist characteristics (Sedikides et al, 2003). In response to the competing perspectives in existing literature, it is expected that findings of the present study will to some extent help sort out the controversy.

Likewise, cross-cultural research also witnessed rivalry views regarding the distribution of self-deception in different cultural contexts. Some suggest that like self-enhancement, self-deception is also a cultural-specific phenomenon, whereas some others argue the ubiquity of this mechanism. Triandis (2011), for example, stated in his recent article that self-deception occurs more frequently in people from simple (e.g., hunters and gatherers), tight (many rules of behavior), or vertical (hierarchical) cultures than in those from complex (e.g., information societies), loose (few rules), or horizontal (egalitarian) cultures, suggesting a link between self-deception and collectivist cultures. Following this logic, one may to some extent assume that people in collectivist cultures (tight and/or vertical), such as China, are more likely to deceive themselves than their counterparts in individualist cultures (loose and/or horizontal), such as the U.S. However, some other research identified associations between individualism and self-deceptive enhancement as well as collectivism and impression management (Lalwani et al, 2006; Lalwani, Shrum, & Chiu, 2009). It's suggested that individualists tend to display self-deceptive behaviors

as individualism's focus on the self would favor expressions that stress personal distinctiveness (Markus & Kitayama, 1991). Collectivists, in contrast, are concerned more about social relationship, conformity and face-saving (Johnson & van de Vijver, 2002) and thus are more closely associated with impression management. While extant self-deception research failed to reach a consensus regarding the link between culture and self-deception, taking an evolutionary standpoint that taps into some general psychological and behavioral traits shared by all humans may help elucidate the puzzle.

Significance of the Study

Drawing upon established research and new insights from evolutionary psychology, the findings of this study will not only illuminate the nature of self-enhancing motive by tapping its relation with self-deception but also shed light on the controversy over the universality of the self-enhancement phenomenon. Research on self-deception in a cross-cultural context has documented mixed results regarding the manifestation of self-deception in difference cultures. This study seeks to expand the literature by investigating the association between self-deception and cultures, targeting specifically a U.S. – China comparison. Despite a wealth of research on self-enhancing motives in human behavior and social relations, little consideration has been given to how these theories and findings can be used to inform the practice of moral education. This study calls attention to the role that moral self-enhancement and self-deception may play in moral thinking and behavior and the challenge they pose to moral education.

CHAPTER II: LITERATURE REVIEW

Existing literature speaks to the bias characteristic of self-enhancement. What is also documented is the debate pertaining to whether the self-serving biases are universally prevalent. Self-deception is routinely considered a construct that is unrelated to self-enhancement. Through a review of theoretical background and related research, this chapter presents an alternative way of understanding the nature of self-enhancement, self-deception, and the relation between the two.

Understanding Self-Enhancement

Self-Enhancement in General

What is of great interest to the present study concerns sentiments similar to those expressed in Alexander Pope's famous quote about human nature: "The greatest magnifying glasses in the world are a man's own eyes when they look upon his own person." As is evident in the wealth of literature, research across several domains has documented the phenomena of self-enhancement – the motivation to "construe or remember events in a way that places one's attributes in the most favorable light that is credible to oneself and others" (Alicke & Sedikides, 2009, p. 2).

As demonstrated by previous research, inflated perception of the self varies along several dimensions. Positive image of the self can be maintained by enhancing the positivity of self-concept (self-advancement) or avoiding the negativity of self-concept (self-protection) (Arkin, 1981). Public self-enhancement occurs when a person is motivated to preserve, improve, or avoid hurting his or her image in the eyes of others (Leary & Kowalski, 1990), whereas private self-enhancement remains unnoticeable except to the individuals (Greenwald & Breckler, 1985). People do not self-enhance in

random areas. Rather, self-enhancement is more likely to take place on qualities or attributes that are the most important to a person's sense of self (Sedikides et al, 2003). Moreover, the way people inflate their self-images can be either "candid" or "tactical" (Sedikides & Strube, 1997; Sedikides, Gaertner, & Vevea, 2005). Some tend to self-enhance explicitly on positive aspects of the self-concept, whereas others may elevate the positivity in an implicit way.

Taylor and Brown (1988) in their widely cited work referred to self-enhancement in general as the Triad of Positive Illusions, i.e., above-average effect, illusion of control, and unrealistic optimism. Illusion of control refers to people's overestimation of the control they have over outcomes or the future. In situations where things happen randomly, most people are still convinced their actions will influence the results. Unrealistic optimism is built on the hope that one has more positive experiences and less negative experiences than others (Langer, 1975; Jenkins & Ward, 1965). Unrealistic optimism, also referred to as optimism bias, is built on the hope that one has more positive experiences and less negative experiences than others (Weinstein, 1980; Weinstein & Klein, 1995). The above-average effect or the than-average effect, describes the tendency to evaluate one's own characteristics or behaviors more favorably than those of an average peer. In this regard, people tend to view themselves, for example, as being happier, having better health prospects, and experiencing higher likelihood of positive events compared to the average person (Freedman, 1978; Hoorens & Buunk, 1993; Perloff & Fetzer, 1986). This effect is so robust that, even when the benchmark on which the self and the average others are judged are identical, the self is still perceived more favorably (Alicke & Govorun, 2005).

Moral Self-Enhancement

The scholarly discussion of self-enhancement has also been expanded to the moral domain, providing a convincing alternative explanation of the observed disjunction of moral standards and moral behaviors. Research has shown robust findings that most people perceive themselves to be above the average in adherence to moral principles (Alicke & Govorun, 2005; Epley & Dunning, 2000; Sedikides & Strube, 1997). The reality is, however, people who strongly endorse morality may still engage in behaviors that are obviously against the welfare of others and moral principles held dear. Batson and Collins (2011) used the term *moral hypocrisy* to depict the “motivation to appear moral while, if possible, avoiding the cost of being moral” (p. 95). It is argued that more is involved in moral failings than just weak moral motivation – the goal of being a moral hypocrite is to pursue self-interest while still upholding the appearance of morality (Batson & Collins, 2011). And this is exactly where self-enhancement comes into play – a means by which “self-interest can be advanced while bamboozling others with one’s alleged adherence to exacting moral standards” (Alicke & Sedikides, 2011, p. 9). For example, participants have been consistently observed in a series of moral hypocrisy studies that most of them avow the moral standard of fairness while selfishly assigning themselves desirable tasks and leaving undesirable ones to another participant (actually fictitious) (e.g., Batson & Thompson, 2001; Batson, Kobrynowicz, Dinnerstein, Kampf, & Wilson, 1997; Batson, Sampat, & Collins, 2005; Batson, Thompson, Seufferling, Whitney, & Strongman, 1999).

Self-Deception

The Notion of Self-Deception

First viewed as a philosophical puzzle, and then discussed as a psychological phenomenon, self-deception has captured interest of scholars of several different disciplines. Self-deception was once a concept discussed solely among philosophers regarding on its existence, realization, and intentionality (Lu & Chang, 2011). The definition of self-deception suggests the self-deceiver is involved in paradoxes where they must 1) hold contradictory beliefs at the same time, and 2) intentionally get themselves to believe in the false information (Deweese-Boyd, 2010). These paradoxes have led to skepticism regarding whether it is psychologically or conceptually possible to hold contradictory beliefs (Mele, 1997; Paluch, 1967). Research in the field of clinical psychology and psychiatry delineates self-deception as a process that renders individuals unaware of the development of their judgments and beliefs (Sackeim & Gur, 1979; Paulhus & John, 1998; Tenbrunsel & Messick, 2004). For example, in contexts such as personality testing, self-deception takes on the form of socially desirable responding tendency, which documents the tendency to give “positively biased responses to questionnaire items when the responses are not true but the respondent believes they are” (Paulhus, 1984).

Early work on socially desirable responding identified two distinct factors of self-deception, labeled as *Alpha* and *Gamma* (Edwards, Diers, & Walker, 1962; Damarin & Messick, 1965; Jackson & Messick, 1962; Wiggins, 1964). The Alpha factor reflects an unconscious attempt to biased self-evaluation, and the Gamma factor represents a conscious or intentional attempt to distort one's self-description. Subsequent research

demonstrated a growing consensus regarding the two empirical factors, in which the *Alpha* factor involves the unrealistically positive but honestly held self-descriptions and the *Gamma* factor indicates the deliberately distorted self-image (Sackeim & Gur, 1979; Paulhus, 1984, 1991).

Assuming a related taxonomy provided by Damarin and Messick (1965), Paulhus (1991) published the Balanced Inventory of Desirable Responding (BIDR) and distinguished two factors of self-deception: *self-deceptive enhancement* and *impression management*. Self-deceptive enhancement describes the unconscious tendency to exaggerate positive attributes and conceal negative attributes to the self (Paulhus & John, 1998). In contrast, impression management refers to the conscious attempt to distort self-representations to create a positive public image (Mick, 1996). BIDR was adopted as one of the core measures in the current study, given that it is one of the most commonly used measures of self-deception; more importantly, as is discussed in more detail below, it allows an examination of the evolutionary benefits of unconscious self-deception and its relation to moral self-enhancement.

Self-Deception as a Fitness-Enhancing Strategy

Unlike philosophers and mainstream psychologists, evolutionary psychologists offer unique insights into the understanding of self-deception as a psychological adaptation to the environment and a fitness-enhancing strategy (Trivers, 1976; 2000), which renders theoretical support to the hypothesized linkage between self-deception and self-enhancement. As evolutionary theory suggests, human beings' physiological mechanisms have been through the evolutionary process called adaptation to become better suited to the environment so as to reproduce copies of genes more successfully.

Applying the same thinking to psychology, evolutionary psychologists propose that not only did our physical organs develop as functions of natural selection, so did our psychological traits. Moreover, it is suggested that much of human behavior is the outputs of evolved psychological adaptations, which natural selection yielded to solve the recurrent problems our ancestors faced (Wright, 1994).

Evolutionary theory predicts the inherent selfishness of human beings. As Richard Dawkins (1976) has stated in *The Selfish Gene*, “We are survival machines—robot vehicles blindly programmed to preserve the selfish molecules known as genes ... This gene selfishness will usually give rise to selfishness in individual behavior” (p. vii). As social animals, people gather in groups and obtain the benefits of social life through constant reciprocal change and cooperation with others (Trivers, 1991). Individuals who appear to be more cooperative are more likely to be rewarded with returned cooperation from fellow humans. However, some would find ways to obtain the benefits of altruism without reciprocating. Deception as a result evolves as a part of social interaction (DePaulo & Kashy, 1998).

While our selfish genes metaphorically suggest an explanation for the origin of self-deception, the law of natural selection also favors the evolution of the ability to detect lies. Those who are not gullible and are more capable of perceiving lies demonstrate better fitness and are more likely to send their genes into the next generation. Laboratory findings have revealed that deception can be spotted through cues such as nervousness, extra cognitive load resulted from manipulating two types of information simultaneously and idiosyncratic signs of nervousness, suppression, and cognitive load (von Hippel & Trivers, 2011). Self-deception therefore evolves as an adaptation to

facilitate deception of others by allowing a person to mask signs of deception (Trivers, 1976, 1985). How does that work? The distortion of information undergoes a process from being conscious to unconscious. While acting deceptively, both the truth and the negation is maintained in consciousness, while only the negation is presented to others. Self-deception enables the deceiver to believe his or her own distortions, keeping only false information in the consciousness and concealing the truth in the unconsciousness (Lu & Chang, 2011). This way the deceiver will be able to mask signs of deception, appear to be telling the truth, and deceive others far more effectively. As Pinker (2011) succinctly puts it, “we lie to ourselves so that we’re more believable when we lie to others” (p. 491).

Linking Self-Deception to Self-Enhancement

A survey of extant literature on self-enhancement and self-deception shows that most of the research either views self-enhancement as an active demonstration of self-deception, or treat the two as unrelated entities, whereas little research has explicitly examined how self-deception as a mechanism facilitates people to convince themselves that they are better than are objectively warranted. Nevertheless, extant research did reveal signs of involvement of self-deception in the way people bias their information processing to “fool” themselves in a self-favorable manner.

Sedikides and Strube (1997) outlined the many ways that people bias their evaluation of themselves versus others, such as processing of self-relevant information, causal attributions, social comparison processes, and self-presentation. As further illustration of these points, people can self-deceive via distorted memory and biased information processing. Many studies show that people tend to selectively remember

more positive than negative self-relevant attributes (e.g., D'Argembeau & Van der Linden, 2008; Skowronski, Betz, Thompson, & Shannon, 1991), seek out selectively for information that confirms a positive self-image (Kuiper & MacDonald, 1982; Skowronski, Betz, Thompson, & Shannon, 1991), and recollect the past in a self-serving manner (Ross, 1989). Research also indicated that people tend to deceive themselves about their own qualities by attributing favorable outcomes to the self and unfavorable outcomes to the environment (Greenwald, 1980; Vohs & Schooler, 2007) or regarding tasks with which they have had positive experience as more self-relevant than those at which they have failed (Hill, Smith, & Lewicki, 1989). In addition, people can be self-deceptive in the way they manage their public image, by either releasing positive information about the self or blasting the achievements of an enemy (Arkin & Baurngardner, 1985; Finch & Cialdini, 1989). On similar lines, Alicke and Govorun (2005) also discussed how better-than-average effect can be achieved through selective recruitment. As the selective recruitment hypothesis suggested, when making comparative judgment, people deceptively create a better-than-average image of themselves by selecting a comparison target who performs especially poor on the judgment dimension (Perfloff & Fetzner, 1986). Moreover, people have the tendency to attend to or weight their own characteristics, beliefs and experiences more heavily than information about the comparison group, which then results in greater confidence in themselves (Alicke & Govorun, 2005).

In addition of the above-discussed evidence that associates self-deception to self-enhancement, adopting an evolutionary psychology perspective can also shed important light into our understanding of the relationship between the two. Evolutionary theory has

been helpful in explaining how biological altruism can evolve and persist. In *The Descent of Man* (1871), for example, Darwin observed that “a tribe including many members who ... were always ready to give aid to each other and sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection” (p. 166, as cited in Okasha, 2009). Within the group, an individual who behaves altruistically at the expense of his own fitness is clearly at disadvantage compared to the other group members; the fitness of the group as a whole however will be enhanced as a result of altruism (Okasha, 2009). The concept of “reciprocal altruism”, introduced and developed by evolutionary biologist Robert Trivers (1971), also stresses the evolution of cooperation as instances of mutually altruistic behavior, but among unrelated organisms. The fundamental idea of reciprocal altruism is that an organism may temporarily reduce its fitness to help another with the expectation of the favor being returned at a later time. The cost of helping therefore might be offset by the likelihood of returned benefit, allowing the relationship to evolve.

To understand self-enhancement in light of evolutionary theory, the tendency to bolster one’s self-image entails great evolutionary benefits. As evolutionary theory suggests, altruistic behavior, such as cooperation, is essentially a strategy of increasing one’s own reproductive fitness. Applying this logic to the current argument, advertising the self as a better cooperator than the average (e.g., being more loyal, more generous, more trustworthy) is actually driven by the motive to obtain the advantage of returned benefits from others. And the key to convincing people of the exaggerated self-image is to sincerely believe it (Pinker, 2011; Trivers, 1991; Wright, 1994). In other words, people must first believe what they exaggerate about and incorporate the false

information into self-evolution before they can confidently convey the distorted image to others, i.e., to self-deceive.

In addition to its role in facilitating interpersonal deception, self-deception also allows people to display more confidence than they actually have (von Hippel & Trivers, 2011). The more confident the self-image is presented, the more likely the individuals are to be viewed by others as leaders (Shamir, House, & Arthur, 1993) and are believed to have stronger social influence than those who lack in confidence (Zarnoth & Sniezek, 1997). Thus, self-deception serves as an important strategy that people can “bolster their image of themselves to themselves and enhance their self-confidence” and “thereby increase the chances that they will be able to influence others and will be chosen for socially important roles” (von Hippel & Trivers, 2011, p. 5).

Taking the similar evolutionary standpoint, Lu and Chang (2011) found self-deception to be positively associated with moral self-concept in a recent study. It was suggested that high moral self-concept tends to result in more conscious blocking of selfish attitudes exercised via self-deception. When there is little conscious curbing due to low moral self-concept, which makes self-deception unnecessary, selfishness is likely to be pursued consciously (Lu & Chang, 2011). Moreover, self-consciousness was found to regulate the way self-deception is exercised. For individuals with high self-consciousness, who are more aware of the self, they are more alert when a conflict between the pursuit of selfish interest and the maintenance of altruistic self-image takes place and thus experience higher levels of self-deception to help conceal selfish interests.

Research on moral hypocrisy has supported the view of self-enhancement as a means to pursue selfish interests by demonstrating how people avow the moral standard of

fairness by behaving selfishly (e.g., Batson et al, 1997; Batson et al, 2005; Batson et al, 1999). For example, in an early study by Batson and colleagues (1997), research participants were asked to assign themselves and a fellow participant (fictitious one) to either a positive-consequence task (comes with a chance of earning a raffle ticket) or a neutral-consequence task (comes without any benefits). Not surprisingly, most research participants, 16 out of 20, assigned themselves to the desirable task, even though very few of them, 1 out of 10, perceived that it is the most morally right decision to assign the desirable task to the self (Batson & Thompson, 2002). In subsequent studies that aimed to investigate the nature of moral motivation, participants were allowed to assign tasks by flipping a coin in private, which seemed to be the fairest method but allowed them to not actually abide by the flip outcome (Batson et al., 1997; Batson & Thompson, 2001). It turned out that about half chose not to flip the coin, of which 90% assigned themselves to the desirable task. And for those who did choose to flip the coin the findings were much the same – 90% assigned themselves to the positive-consequence task, which was a significantly higher percentage than the expected 50% for a fair coin flip (Batson & Thompson, 2002).

Examining Self-Enhancement and Self-Deception in Cultural Contexts

Defining Cultural Differences

As a culture-dependent perspective would suggest, an individual's psychological system is shaped by its cultural system through societal institutions and enculturation practices (Sedikides et al, 2003; Sedikides et al, 2005). Different cultural systems have their unique definitions of socially desirable members (Markus, Mullally, & Kitayama, 1997). Extant literature has commonly distinguished one cultural system from another in

terms of individualism and collectivism. Western cultures are typically labeled as individualistic cultures, given their emphasis on the self and viewing the self as independent of in-groups (Chang, 2008; Greenwald, 1980). For members of individualist cultures, the attainment of independence, agency, freedom from societal constraints, and personal success are highly regarded and sought after (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Spindler & Spindler, 1990). Eastern cultures are usually viewed as collectivistic, given their focus on the priority of group goals over individual goals and the importance of harmony within social groups. Thus, cooperation, inter-personal harmony, attending to significant others, and responsibility to the group are strongly expected from members of collectivist cultures (Bond, Leung, & Wan, 1982; De Vos, 1985).

It is suggested that members of individualist cultures and members of collectivist cultures differ distinctly in the way they conceptualize the self in terms of its relation to the social contexts (Markus & Kitayama, 1991a). In particular, Western cultures tend to construe the self as an autonomous and unique individual and as separate from their social context – a representation called independent self-construal. People in Western cultures typically obtain positive self-regard from the “ability to express self, validate internal attributes” (Markus & Kitayama, 1991b, p. 230, Table 1). Eastern cultures, in contrast, depict the self as fundamentally embedded within a larger social network – called an interdependent self-construal. The positive views of the self are often attained from the “ability to adjust, restrain self, and maintain harmony with social context” (Markus & Kitayama, 1991b, p. 230, Table 1).

These divergent cultural orientations have also been demonstrated in the distinct cognitive processes individuals adopted. Nisbett and colleagues (Nisbett, Peng, Choi, & Norenzayan, 2001) contended that East Asians and Westerners employ different cognitive processes, namely, holistic versus analytic cognition. People in East Asian cultures which emphasize the fundamental relatedness of individuals to each other, are more inclined to view the focal object and its context as a whole with attention being paid to the part-whole relations and continuity – a holistic approach. In contrast, people in Western cultures, who view themselves as independent, self-contained, and autonomous individuals, tend to detach the object from its context, focusing on the unique attributes of the object – an analytic approach (Nisbett, Peng, Choi, & Norenzayan, 2001). Nisbett et al. (2001) speculated that the origin of these differences is traceable to markedly different social organizations. For example, a complex and interdependent social network represented by most Asian cultures requires people to attend to relationships and context. Therefore, the sense of attachment to the environment and groups makes people within such cultures more attentive to attributes that are relationship-laden and environment-relevant, and self-enhance on these attributes.

Is the Motivation to Self-Enhance Universal?

As suggested by the research reviewed above, the interplay of cultural practices and cognitive processes may contribute to distinct psychological bases for self-evaluation motivations. Self-enhancement represents the motivation to influence thinking and behavior towards the direction of protecting, maintaining, or elevating the positivity of the self (Sedikides et al, 2003). Thus from the culture-dependent perspective, self-enhancement should be prevalent in people with independent self-construal, who are

commonly seen in individualist cultures (Heine, Lehman, Markus, & Kitayama, 1999; Heine, 2003, 2005). In contrast, for individuals with interdependent self-construal, who are usually fostered in collectivist cultures, they are motivated to fit in, restrain self, and maintain group harmony; self-criticism, rather than self-enhancement, constitutes a motivating factor for them (Heine et al, 1999; Heine, 2003, 2005). The debate over whether self-enhancement motivation is culture-dependent or universal will be discussed in more detail below.

In recent years, self-enhancement researchers have become increasingly interested in whether self-enhancement is only characteristic of relatively individualistic worldviews or whether it extends to collectivistic worldviews as well (Balcetis et al, 2008; Heine et al, 1999; Sedikides et al, 2003). In a review paper on positive self-regard, Heine, Lehman, Markus, and Kitayama (1999) first proposed that the need for positive self-regard is culturally dependent. Reporting the results from a number of cross-cultural studies, especially with North American (US and Canadian) and Japanese samples, Heine et al (1999) posited that the need for positive self-regard may not exist in Japan, as it does in North America. One reason they provided is that Japanese, influenced by their culture that values group membership and duty over individual rights, are motivated not to stand out of a group. Accordingly, self-enhancement, which highlights the positivity of oneself, is not found in Japanese culture. Furthermore, Heine (2003a; 2003b; 2005) advanced that Japanese are not motivated to self-enhance; rather, they are motivated to be concerned for what other people think about them. Specifically, it is argued that underlying the common motivation for both North Americans and Japanese is the motive to be a good cultural member, rather than to self-enhance. In contrast to North

Americans who satisfy the motivation through self-enhancement, Japanese satisfy this motivation through face maintenance, that is, being concerned about what others think of them, (Heine, 2005).

Heine and colleagues' conclusion sparked studies that have provided empirical evidence supporting the assumption of universal self-enhancement. Sedikides and colleagues (2003) challenged the claim that the need for self-regard is culture-dependent and affirmed otherwise the universality of such need. As shown in substantial lines of research, positive self-regard serves to buffer against emotional and behavioral problems (Anderson, 1999; Kurman & Sriram, 1997; Leary, 1999, as cited in Sedikides et al, 2003), reduce feelings of existential terror (Greenberg, 2008; Greenberg, Solomon, & Pyszczynski, 1997,), and correlate with optimism, resiliency, and coping with adversity (Bonanno, Field, Kovacevic, & Kaltman, 2002; Taylor & Armor, 1996, as cited in Sedikides et al, 2003). Given its wide-ranging effects on human cognition, emotion, and behavior, it is reasonable to predict that self-enhancement, which serves as the cognitive or behavioral manifestations of the need for positive self-regard, should be a universal desire as well.

Existing evidence has suggested that regardless of cultural backgrounds, people strategically self-enhance on personally important dimensions, i.e., Westerners self-enhance on individualistic attributes, whereas Easterners self-enhance on collectivistic attributes (Sedikides & Strube, 1997; Sedikides et al, 2003). Sedikides and colleagues' subsequent study (Sedikides et al, 2005) replicated their previous findings, showing that collectivists demonstrate self-serving biases when traits valued in collectivist cultures, such as cooperativeness and loyalty are assessed. In addition, as with members of

individualist cultures, the more that members of collectivist culture value a trait, the more they view themselves as superior to others on that trait. The present study adopts an orientation consistent with the universalist viewpoint. Informed by evolutionary theory and thinking, this study further explores the nature of self-enhancement by tapping its relationship with the innate tendency to engage in self-deception. This study thus provides an alternative interpretation of the prevalence of self-enhancing motive and calls attention into the role the distortions and biases may play in our moral thinking and behavior.

Self-Deception in Cultural Contexts

Cross-cultural researchers have for long been fascinated by the question “who are more likely to present themselves honestly – collectivists or individualists?” Extant research has provided mixed answers. Some have linked collectivism with deception, lying, and face-saving behavior (Lewis & George, 2008; Triandis, 1995; Triandis, 2001; Triandis & Suh, 2002, as cited in Lalwani et al, 2006). In comparison, individualism has been associated with sincerity, authenticity, and honesty (Trilling, 1972; van Hemert, van de Vijver, Poortinga, & Georgas, 2002, as cited in Lalwani et al, 2006). For example, in a study of culture’s role in people’s deceptive behavior, Lewis and George (2008) found Korean respondents, who exhibited greater collectivistic values, to be more apt to employ deception compared to American respondents. Additional findings from the study also showed that whereas American respondents tended to lie about where they lived, their age, and interests, Korean respondents were apt to lie about their job, salary, and physical appearance. Similarly, Triandis and Suh (2002) indicated that lying is considered more acceptable in collectivistic than in individualistic cultures when it comes to saving face or

helping in-groups. Triandis (2011) posited that self-deception occurs more frequently in people from simple (e.g., hunters and gatherers), tight (many rules of behavior), or vertical (hierarchical) cultures than in those from complex (e.g., information societies), loose (few rules), or horizontal (egalitarian) cultures.

However, some research instead suggests that like self-enhancement, self-deception is also a universal phenomenon with cultural variations in its demonstration. In their study exploring the role culture plays in desirable responding styles, Lalwani and colleagues (2006) identified links between socially desirable responding and different categories of cultural orientation. Specifically, they found self-deceptive enhancement to be positively associated with horizontal individualism and impression management be positively related to horizontal collectivism. These findings suggested that people regardless of cultural backgrounds would engage in self-deception to serve their culturally relevant goals. In a more recent study researchers (Cai, Sedikides, Gaertner, Wang, Carvallo, Xu, O'mara, & Jackson, 2011) showed evidence that lent support to the hypothesis of tactical self-enhancement in China. It was found that when high on dispositional modesty or situationally prompted to behave modestly, Chinese participants manifested low explicit enhancement of self-image but also concurrently viewed their modest behaviors as evidence of positively valued self which lead to increased implicit self-esteem.

Admittedly, many research efforts have been devoted to uncovering the links between self-enhancement and its cultural correlates, most of them targeting a U.S. – Japan comparison. We lack studies that investigate self-enhancing perceptions in Chinese culture and a focus specifically on an U.S. – China comparison. The same is

true for self-deception research. China has been conventionally categorized into the tight and vertical type of collectivist cultures (Triandis, 1995). Three decades ago when the country decided to take a more individualist road towards its future and the government slowly began to reduce its grip on social and collectivist processes, new economies, policies and mass media have aided China in creating a society in which collectivism and individualism appear to co-exist as leading social values. The younger generations of Chinese seem to have identified themselves with some Western values, such as individualism. Considering the individualist-collectivist dichotomy in modern Chinese society, it would be interesting and at the same time necessary to reexamine the position of young Chinese on the dimensions of cultural variation; more importantly, how their relative identification with cultural orientations might influence the way they perceive themselves compared to their counterparts in the U.S.

Purpose of the Study

The primary purpose of this study is to test the hypothesized correlation between self-enhancement and self-deception as functions of self-construal in a cross-cultural context. Specifically, this study endeavors to: 1) find out if as the universalist viewpoint suggests, moral self-enhancement exists within both cultural groups or it is a culture-specific motivation; 2) investigate the relationships between moral self-enhancement and self-deception within U.S. and Chinese samples respectively; and 3) examine how self-construal influences moral self-enhancement and self-deception.

Hypotheses Development

Hypothesis 1 is developed to test the universality of moral self-enhancement. Many researchers posited that self-enhancement, which is driven by the quest for positive

self-regard, is a universal human motive (Fiske & Taylor, 1984; Greenwald, 1980; Sedikides et al, 2003). Evolutionary thinking would argue that self-enhancement is a universal motivation that evolves as a psychological adaptation to the social environment (Trivers, 1976; 1985). Based on the evidence above, the following hypothesis is developed.

H1: Moral self-enhancement exists independent of participants' cultural background or self-construal. Specifically, (a) across two cultural groups, individuals would rate their own moral attributes (e.g., character, sense of responsibility) more favorably than those of others, and (b) regardless of the type of self-construal that individuals primarily identified themselves with (independent self-construal vs. interdependent self-construal), participants would self-enhance by rating their own moral attributes significantly higher than those of others.

Hypothesis 2 is developed to investigate the influence of self-deception on moral self-enhancement. Evolutionary theory explains how altruism and cooperation can extend beyond kin (Trivers, 1971). Accordingly, people who advertise the self as a better cooperators are more likely to be rewarded with altruism and cooperation. Self-deception allows people to believe their inflated self-image so that they could convince others of the distortion more effectively. Previous research on moral hypocrisy has demonstrated how people may obtain the social and self rewards of being seen and seeing oneself as moral while, if possible, reaping the material rewards of acting selfishly (Batson, 2011; Batson & Collins, 2011; Batson & Thompson, 2001). Based on this analysis, the following hypothesis was established.

H2: Self-deception significantly predicts moral self-enhancement.

Hypothesis 3 is developed to examine the influence of self-construal on moral self-deception. Hypothesis 4 tests the influence of self-construal on self-deception. Previous work has recognized that collectivism and individualism are dichotomous when compared across cultures but can be orthogonal to each other at the individual level (Gelfand, Triandis, & Chan, 1996; Hofstede, 1980). Thus, measuring self-construal within a single culture and comparing between independent and interdependent individuals will provide direct evidence on how cultural differences at individual level affect the extent to which people self-enhance and self-deceive.

H3: Across two cultural groups, moral self-enhancement is greater among individuals with independent self-construal than those with interdependent self-construal.

H4: Across two cultural groups, self-deception is stronger among independents than interdependents.

Hypothesis 5 is developed to examine the big picture of how self-deception and self-construal together influence individuals' moral self-enhancement.

H5: Across two samples, both self-deception and self-construal significantly predict moral self-enhancement.

CHAPTER III: METHODOLOGY

This chapter provides a description of the research methodology. Included is a description of the data collection procedure, instrumentation, and data analysis technique employed to test the hypotheses.

Sample

Data were collected from convenience samples of college students enrolled at a mid-west university in the U.S. and college students enrolled at a university in a geographically similar location of Central China. The two universities are about the same size in terms of student population and both located in relatively large cities. Previous research has suggested that individuals from the U.S. are highly independent and individuals from China are highly interdependent (Markus & Kitayama, 1991). As many have also recognized, seemingly dichotomous cultural scripts can actually lie side by side at the individual level; one or the other may become more salient in certain domain or contexts (Coon & Kimmelmeier, 2001; Dorner, Orellana, & Jimenez, 2008). Using a self-report measure, the general cultural orientations of participants in the U.S. and Chinese samples were examined for the purpose of the study.

Procedures

Instructors of undergraduate courses in the Department of Economics and Management and College of Education in the two universities were contacted and asked for permission to recruit research participants from their classes. Once permissions were given by the instructors, a date and time were arranged to introduce the research project and invite individuals to volunteer in the study. The researcher distributed consent forms and questionnaires, and asked students to read the consent forms. It was stated clearly in

the consent forms that there would be no penalty for declining to participate in the study. Students who consented to participate in the study signed on the form and continued to complete a battery of questionnaires. The time required for filling out the paper-and-pencil questionnaires was approximately 40 minutes.

Measures

Moral Self-Enhancement Scale (MSES). The 14-item MSES was developed by the researcher and colleagues and used in the current study to measure moral self-enhancement.

The social comparison theory (Festinger, 1954) suggests that people have the natural tendency to evaluate their own opinions and abilities; when reference to objective criteria is not available, people would compare their opinions and abilities with those of others. Previous research implied the involvement of a social comparison process in self-enhancement and focused on the extent to which individuals believe they compare favorably relative to others. In Brown's study (1986), for example, self-enhancement bias in social cognition was manifested by the difference between college students' rating on positive attributes of themselves and their ratings on the same traits of people in general. Other researchers (Brown & Kobayashi, 2002; Kobayashi & Greenwald, 2003) also adopted the social comparison methodology in their self-enhancement studies, using general others as a reference point of social comparison. The MSES thus operationalized moral self-enhancement as the discrepancy between an individual's self-perception and his/her perception of others.

The original MSES was a 30-item questionnaire, consisting of 15 self-regard items and 15 other-regard items presented in random order. The self-regard items asked

participants to rate the degree to which they believe themselves to possess traits such as stable character and sense of responsibility. An example of the items was “I will take responsibility for what I do even in difficult situations.” The other-regard items were identical to self-regard items except that the subject “I” was replaced with “Other people”. Hence: “Other people will take responsibility for what they do even in difficult situations.” Ratings were given based on a Likert scale in which 1 meant “strongly disagree” and 5 meant “strongly agree”. The moral self-enhancement effect was measured by the difference in means of respondents’ own ratings and his/her ratings of others, with larger self-other discrepancy indicating greater moral self-enhancement.

The original MSES was first translated into Chinese following the procedure outlined by Brislin (1986). The two versions of MSES were then tested in a pilot study with 93 U.S. students and 101 Chinese students, who were recruited following the same procedure from the same two student populations as in the current study. The refinement process of the MSES included item-total correlation analysis, factor analysis and reliability analysis. Items with low item-total correlations were first removed, and factor analyses using principal factoring and promax rotation (Gorsuch, 1983) were then performed to explore the underlying factor structures and further eliminate items. Results of factor analyses supported a two-factor structure for both the self-regard subscale and the other-regard subscale. After items with low factor loadings (less than 0.40) or double-loading items with secondary loadings of 0.30 or greater were removed, the MSES was trimmed down to a 14-item version, including 7 self-regard items and 7 other-regard items. Following the same procedure, the number of items in the Chinese version

was also reduced to 14. The 14-item MSES was viewed as the final version and used in the current study.

The Self-Construal Scale (SCS). The Self-Construal Scale (Singelis, 1994), a two-factor 24-item self-report measure, was used to assess the strength of an individual's independent self-construal and interdependent self-construal. Respondents indicated their agreement with each of the items on a Likert Scale where 1 meant "strongly disagree" and 7 meant "strongly agree". A sample independent self-construal item was "I enjoy being unique and different from others in many respects." A sample interdependent self-construal item was "It is important for me to maintain harmony within my group." Mean ratings of each subscale were derived to give participants an independent self score and an interdependent self score; high mean scores indicated high levels of independent self-construal and interdependent self-construal. This scale was reported to have adequate reliability for the independent self-construal subscale ($\alpha = .70$) and interdependent self-construal subscale ($\alpha = .73$) respectively (Singelis & Sharkey, 1995), as well as content validity and construct validity (Singelis, 1994). The method used by Balcetis and colleagues (2008) was adopted to determine participants' general cultural tendencies. Those whose independent scores were higher than interdependent scores were assigned to the independent group. Those whose interdependent scores were greater than independent scores were assigned to interdependent group. Participants whose general self-construal type cannot be defined (all are high on both independent and interdependent) would be dropped from analyses.

The Balanced Inventory of Desirable Responding (BIDR, version 6). The Balanced Inventory of Desirable Responding (BIDR) was a 40-item instrument

developed to assess the degree to which self-reports are distorted (Paulhus, 1991). The two subscales of BIDR were supposed to capture two major social desirable responding dimensions, i.e., Self-Deceptive Enhancement (SDE) and Impression Management (IM). Each subscale consisted of 20 items. Participants were asked to indicate how truly each statement describes them using a Likert scale ranging from 1 “not true” to 7 “very true”. The SDE subscale included items such as “I have not always been honest with myself”, with high scores on the scale reflecting a tendency towards an unconscious promotion of self-image. The IM subscale included items such as “I rarely appreciate criticism”, with high ratings on the scale indicating a conscious desire to maintain a favorable impression. As for scoring, after revising negatively termed items, only extreme response (6 or 7) was given one point. Thus, total points for each subscale were likely to range from 0 to 20. Values of coefficient alpha were reported to range from .68 to .80 for the SDE subscale and from .75 to .86 for the IM subscale (Paulhus, 1991). Consistently, a reliability generalization analysis reported that across samples the BIDR produced adequately reliable scores, with the mean reliability coefficient of the IM subscale being .74, .68 for the SDE subscale and .80 for the overall BIDR scale (Li & Bagger, 2007).

All three of the instruments were originally developed in English. To administer to the Chinese sample, the English version of the instruments was translated to Chinese following the translation and back-translation steps of Brislin’s model (1986). The MSES was the first scale for the subjects to complete, followed by the SCS and the BIDR. The scales used for exploratory purposes were put at the end to avoid possible influence on responses to the other surveys. The whole survey packet included the three

instruments described above and basic demographic information questions including age, gender, ethnicity, and education level.

Statistical Analysis

The characteristics of demographic information were reported using descriptive statistics. Reliabilities of all measures were tested to determine if individuals respond consistently across items. A Cronbach's alpha reliability estimate of 0.6 or higher was adopted to determine acceptable level of internal consistency.

Paired sample *t* tests were performed to capture significant difference(s) between mean ratings of self and mean ratings of others for participants across two cultural groups and for participants of different self-construals.

Multiple linear regression analyses were conducted to model the relationships between self-enhancement, self-deception, and self-construal. The model summary and the regression coefficients were interpreted to determine any statistical significance among the variables.

Multivariate Analysis of Variance (MANOVA) was performed to test for differences in individuals' moral self-enhancement and self-deception between individuals with different self-construals. If the MANOVA analyses showed significant differences, then Analysis of Variance (ANOVA) was checked to investigate the differences.

CHAPTER IV: RESULTS

This chapter presents results of data analyses and consists of three sections. The first section provides a description of participant characteristics. This section is followed by a presentation of the results of data analyses. Hypotheses testing are presented in the last section.

Sample Characteristics

Participants were undergraduates recruited from a U.S. university (n=156) located in a Mid-western state and a Chinese university (n=107) located in Central region of China. The U.S. participants' ages ranged from 20 to over 49, among which 81.4% aged 20 through 29 (n=127). Given the fact that all Chinese participants fell into the age group of 20-29, the current study focused solely on participants within this age group, which resulted in a total 127 U.S. participants (95 females and 32 males) and a total of 107 Chinese participants (54 females and 53 males).

The majority of U.S. participants were White or Caucasian (n=103, 81.1%), followed by 13.4% Black or African American (n=17), 3.9% Hispanic (n=5) and 1.6% Asian (n=2). The U.S. participants were primarily education majors (92.1%). The Chinese participant's academic backgrounds included economics (39.3%) and business administration (60.7%). Details of participant characteristics were provided in Table 1.

Table 1

Demographic Characteristics of Participants

Characteristics		U.S. (n=127)		China (n=107)	
		Frequency	Percentage	Frequency	Percentage
Ethnic group	White or Caucasian	103	81.1	-	-
	Black or African American	17	13.4	-	-
	Hispanic	5	3.9	-	-
	Asian	2	1.6	107	100
	American Indian or Alaskan Native	-	-	-	-
	Other	-	-	-	-
	Gender	Female	95	74.8	54
	Male	32	25.2	53	49.5
Age	20-29	127	100	107	100
Major	Education	117	92.1	-	-
	Economics	-	-	42	39.3
	Business administration	10	7.9	65	60.7

Data Analyses**Data Screening**

The dataset under analysis consisted of 234 cases, including 127 U.S. participants and 107 Chinese participants. SPSS Descriptives was used to obtain means, standard deviations, minimum, maximum and check for out of range values for demographic questions (e.g., gender, level of education, ethnicity, etc.) and for each item of the three instruments.

Reliabilities of Measures

The reliabilities of all measures were obtained using Cronbach's alpha. The test of reliability showed that the Cronbach's alpha coefficients of each sub-scale of Moral

Self-Enhancement Scale (MSES), Self-Construal Scale (SCS), and Balanced Inventory of Desirable Responding (BIDR, 6th version) were in an acceptable range (Table 2). It is noted that the original BIDR consisted of 40 items, with 20 items on each of its two subscales. However, since statements “I am not a safe driver when I exceed the speed limit,” and “I sometimes drive faster than the speed limit” do not apply to general Chinese participants, for whom it is not common to have their own car and drive to school, these two items were dropped, leaving 19 items on each subscale for subsequent analyses. Overall, the reliability estimates for the self- and other- subscales of the MSES was .68 and .77 respectively. The reliability estimates for the two subscales of the SCS, namely, independent self-construal and interdependent self-construal also reported good overall internal consistency ($\alpha = .77$ and $\alpha = .69$). BIDR in the current sample demonstrated acceptable internal consistency, with reliability estimates being .63 and .60 for self-deceptive enhancement and impression management respectively. Group means and standard deviations of measures can be found in table 3.

Table 2

Cronbach's Alpha Reliabilities

Measures	Number of items	U.S.	China	Overall
MESE	14			
Rating of self	7	.70	.67	.68
Rating of others	7	.71	.64	.77
SCS	24			
Independent self-construal	12	.61	.76	.77
Interdependent self-construal	12	.69	.75	.69
BIDR (6 th version)	38			
Self-deceptive enhancement	19	.64	.68	.63
Impression management	19	.66	.53	.60

Table 3

Descriptive Statistics of Moral Self-Enhancement, Self-Construal, and Self-Deception by Cultural Group

Measures	Range	U.S.		China	
		M	SD	M	SD
Moral self-enhancement		1.21 ^{***}	0.64	0.22	0.48
Rating of self	1-5	3.68 [*]	0.54	3.50	0.54
Rating of others	1-5	2.47	0.51	3.28 ^{***}	0.52
Independent self-construal	1-7	5.04 ^{***}	0.64	3.89	0.67
Interdependent self-construal	1-7	4.85	0.69	4.69	0.79
Self-deceptive enhancement	1-7	5.32	3.02	5.92	3.09
Impression management	1-7	5.56 ^{***}	3.04	4.39	2.54

Note. ^{*} $p < .05$. ^{***} $p < .001$.

Correlations between Measures

Correlations between measures for U.S. sample are as showed in the top panel of Table 4. Over the entire sample, MSE was positively associated with IND ($r = .38, p < .01$) but not INTER. In addition, MSE was found to be positively related to both SDE ($r = .48, p < .01$) and IM ($r = .18, p < .05$). This suggests that people with propensity to self-deceive, regardless of the form it takes, are likely to engage in moral self-enhancement. While both self-deception measures were significantly correlated with MSE, the link was much stronger with SDE than with IM. SDE was found to be positively correlated with independent self-construal, whereas IM was positively correlated with interdependent self-construal. Both SDE and IM showed significant positive relationship with rating of self.

As shown in the bottom panel of Table 4, the correlation matrix for Chinese sample did not reveal any significant relationships between MSE and self-construal or between MSE and self-deception. It may sound quite surprising at first. However, if we recall that MSE is operationalized as the discrepancy between self-evaluated morality and one's evaluation of other people, the absence of significant relationships is still interpretable mathematically. That is, if both rating of self and rating of others are positively related to, for example, self-deception, it then suggests that individuals who experience higher levels of self-deception would rate higher on both their own morality and other people's morality, whereas those who experience less self-deception would rate both their own morality and that of others less favorably; however, the difference between the rating of self and rating of others represented by MSE may remain constant, which explains why MSE is not correlated with levels of self-deception. A closer examination of the results in Table 3 confirmed the above described assumption. Results showed that both rating of self and rating of others were associated with self-construal (IND and INTER) in the positive direction; both ratings were also positively associated with self-deception (SDE and IM). Interpretation of these correlations will be discussed in detail in the following chapter.

Table 4

Correlations among Measures of Moral Self-Enhancement, Self-Construal and Self-Deception by Cultural Group

	MSE	Self	Others	IND	INTER	SDE	IM
U.S. (n=127)							
MSE	-						
Self	.64**	-					
Others	-.58**	.25**	-				
IND	.38**	.38**	-.07	-			
INTER	.01	.11	.10	.15	-		
SDE	.48**	.46**	-.11	.28**	-.02	-	
IM	.18*	.30**	.10	.07	.19*	.51**	-
China (n=107)							
MSE	-						
Self	.49**	-					
Others	-.41**	.60**	-				
IND	-.03	.44**	.49**	-			
INTER	.13	.46**	.36**	.71**	-		
SDE	.04	.41**	.39**	.32**	.50**	-	
IM	.09	.33**	.26**	.21*	.28**	.59**	-

Note. MSE= Moral Self-Enhancement; Self= rating of self; Others= rating of others; IND= independent self-construal; INTER= interdependent self-construal; SDE= self-deceptive enhancement; IM= impression management. * $p < .05$. ** $p < .01$.

Hypothesis 1

Hypothesis 1(a) stated that across two cultural groups (U.S. and China) participants would demonstrate moral self-enhancement, i.e., participants would evaluate their own moral attributes (e.g., character, sense of responsibility) more favorably than those of others. Hypothesis 1(b) stated that regardless of the type of self-construal which individuals primarily identified themselves with (independent self-construal vs. interdependent self-construal), participants would self-enhance morally by rating their

own moral attributes significantly higher than those of other people. Both hypotheses were tested using paired samples' *t* tests.

As shown in Table 5, participants from both U.S. and Chinese samples tended to judge their own moral attributes ($M=3.68$ and $M=3.50$ respectively) significantly more favorably than those of other people ($M=2.47$ and $M=3.28$ respectively, $p < .001$). Thus, hypothesis 1(a) was supported.

To test hypothesis 1(b) individuals with strong independent self-construal and those with strong interdependent self-construal in each cultural group were identified using the method outlined by Balcetis, Dunning, and Miller (2008). Difference scores between independent self-construal and interdependent self-construal were first calculated for individual participants. The participants were categorized as having an independent self-construal when the difference scores were greater than zero. When the difference scores were lower than zero, the participants were coded as having an interdependent self. When the difference scores were equal to zero, the data was excluded from the analysis. Results showed that more U.S. participants were categorized as having an independent self-construal ($n=74$) than an interdependent self-construal ($n=53$). In contrast, more Chinese participants were coded as having an interdependent self-construal ($n=97$) than an independent self-construal ($n=10$).

Statistically significant differences between rating of self and rating of others were observed for participants with different self-construals. Within the U.S. sample, both participants identified as strong independents and strong interdependents tended to morally self-enhance, that is to rate themselves significantly more positively ($M=3.73$ and $M=3.63$) than other people ($M=2.42$ and $M=2.53$, $p < .001$). Similarly, Chinese

participants who were interdependent oriented were likely to evaluate themselves (M=3.50) significantly more favorably than other people (M=3.27, $p < .001$). No significant difference was found for Chinese interdependents due to its small sample size (n=10). Therefore, hypothesis 1(b), which stated that individuals' evaluation of themselves will be more favorable than their evaluation of other people independent of their primary self-construal, was supported for the most part.

Table 5

Mean Comparison of Rating of Self and Rating of Others by Cultural Group and Self-Construal

Cultural groups	Rating of self		Rating of others	
	M	SD	M	SD
U.S.	3.68 ^a	0.54	2.47	0.51
Strong independents (n=74)	3.73 ^b	0.53	2.42	0.48
Strong interdependents (n=53)	3.63 ^c	0.55	2.53	0.54
China	3.50 ^d	0.54	3.28	0.52
Strong independents (n=10)	3.51	0.63	3.40	0.53
Strong interdependents (n=97)	3.50 ^e	0.54	3.27	0.52

Note. ^a For U.S. sample as a whole, means for rating of self and rating of others were different at $p < .001$. ^{b, c} For both independents and interdependents within U.S. sample, means for rating of self and rating of others were different at $p < .001$. ^d For Chinese sample as a whole, means for rating of self and rating of others were different at $p < .001$. ^e For independents within Chinese sample, means for rating of self and rating of others were different at $p < .001$.

Hypothesis 2

Hypothesis 2 tested the influence of self-deception on moral self-enhancement, while controlling for the influence of gender and cultural group (coded 1 for U.S. and -1 for China). Multiple linear regression analysis was used to test this hypothesis.

Hypothesis 2(a) stated that self-deception would significantly predict moral self-enhancement. Results indicated that the regression model was significant ($F(3, 229) = 53.19, p < .001, R^2 = .48$). SDE but not IM had a significant positive effect on moral self-enhancement ($\beta = .24, p < .001$). Participants who experienced high levels of SDE were more likely to self-enhance morally compared to those who reported low levels of SDE. Thus, hypothesis 2(a) regarding SDE was supported. In addition, there was a significant positive effect associated with one control variable, cultural groups ($\beta = .68, p < .001$). U.S. participants in general were more likely to demonstrate moral self-enhancement than were Chinese participants (Table 6).

Table 6

Multiple Regression of Self-Deception on Moral Self-Enhancement

	Moral self-enhancement				
	R^2	F	B	$SE B$	β
	.48	53.19***			
SDE			.06	.01	.24***
IM			-.01	.02	-.02
Cultural Groups			.51	.04	.68***
Gender			-.03	.08	-.02

Note. *** $p < .001$.

Hypothesis 2(b) tested interaction effect between culture and self-deception on moral self-enhancement using multiple linear regression analysis. Specifically, it was

predicted that the effect of SDE on moral self-enhancement would be stronger for U.S. participants than for Chinese participants. Likewise, the hypothesis predicted that the influence of IM on moral self-enhancement would be stronger for Chinese participants than for their U.S. counterparts. The interaction terms were produced by multiplying SDE and culture as well as IM and country respectively. The regression model was significant ($F(3, 227) = 41.17, p < .001, R^2 = .52$). In addition to the positive effects of SDE and culture, the interaction between culture and SDE also exhibited a significant positive effect on moral self-enhancement ($\beta = .48, p < .001$) (Table 7), suggesting that the influence of SDE on moral self-enhancement was greater for U.S. participants than for Chinese participants. The interaction effect of culture and IM was not significant on moral self-enhancement. Therefore, hypothesis 2(b) was partially supported for the interaction between SDE and culture but not for the interaction between IM and culture.

Table 7

Multiple Regression of Self-Deception with Interaction Term on Moral Self-Enhancement

	Moral self-enhancement				
	R^2	F	B	$SE B$	β
	.52	41.17***			
SDE			.06	.01	.22***
IM			.00	.02	-.001
Cultural Groups			.29	.08	.38***
SDE x Cultural Groups			.06	.01	.48***
IM x Cultural Groups			-.02	.02	-.15
Gender			-.03	.08	-.02

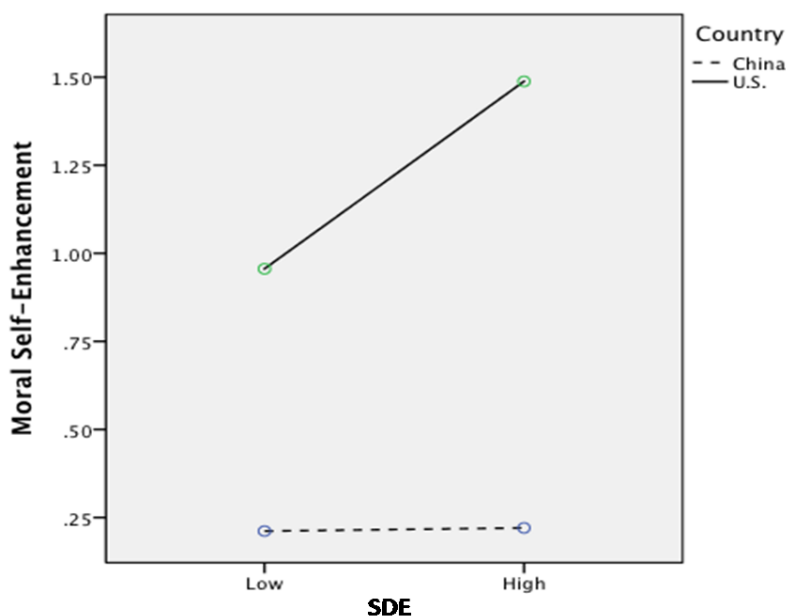
Note. *** $p < .001$.

To visually present the effect of SDE on moral self-enhancement between U.S. participants and Chinese participants, the researcher dichotomized SDE using median

split and conducted analysis of variance (ANOVA). The results confirmed the significant interaction between SDE and country ($F(1, 230) = 13.54, p < .001$), indicating that SDE had a much more pronounced effect for U.S. participants than for Chinese participants (Figure 1).

Figure 1

Influence of SDE on Moral Self-Enhancement for U.S. and Chinese Participants



Hypotheses 3 & 4

Hypothesis 3 stated that across two cultural groups, moral self-enhancement is greater for individuals with an independent self-construal than those with an interdependent self-construal. Hypothesis 4 stated that across two cultural groups, self-deception is stronger for independents than for interdependents. Together, these two hypotheses tested the influence of self-construal on moral self-enhancement and self-deception. Multivariate analysis of variance (MANOVA) was used to detect differences in moral self-enhancement and self-deception between individuals with independent self-

construal and those with interdependent self-construal. Hypotheses 3 and 4 were tested for the U.S. sample and Chinese sample individually and results were reported for each cultural group.

Within the US sample, results of MANOVA showed that self-construal had a significant effect on participants' moral self-enhancement and self-deception (Wilks' $\lambda = .91$, $F(3, 123) = 4.16$, $p < .01$). Further ANOVA revealed that individuals with independent self-construal reported greater discrepancy between rating of self and rating of others, i.e., demonstrating stronger moral self-enhancement, than those with interdependent self-construal ($F(1, 125) = 4.38$, $p < .05$). In addition, independents reported marginally higher levels of SDE compared to interdependents, whereas the two did not differ significantly on levels of IM (See Table 8 for means and standard deviations).

Table 8

Means and Standard Deviations for U.S. Participants

Measures	Strong independents		Strong interdependents	
	M	SD	M	SD
Moral self-enhancement	1.31*	0.07	1.07	0.09
SDE	5.74 †	0.35	4.73	0.41
IM	5.26	0.35	5.98	0.42

Note. * $p < .05$. † $p < .10$.

On similar lines, MANOVA was conducted to test hypotheses 3 and 4 for Chinese sample. Results indicated a significant effect of self-construal on moral self-enhancement and self-deception (Pillai's Trace = .055, $F(3, 103) = 2.73$, $p < .05$). Given the significance of the overall test, the univariate main effect of self-construal on moral self-enhancement, SDE and IM were examined individually through ANOVA.

Significant univariate main effect for self-construal was only obtained for SDE ($F(1, 105)=4.86, p < .05$) (See Table 9 for means and standard deviations). For Chinese participants, interdependents reported experiencing more SDE compared to independents, whereas they did not differ significantly in moral self-enhancement or IM.

Table 9

Means and Standard Deviations for Chinese participants

Measures	Strong independents		Strong interdependents	
	M	SD	M	SD
Moral self-enhancement	3.51	0.17	3.50	0.06
SDE	6.12*	0.31	3.90	0.96
IM	4.40	0.81	4.39	0.26

Note. * $p < .05$.

Taken together, both hypotheses 3 and 4 were partially supported. Concerning hypothesis 3, self-construal exerted a stronger effect on moral self-enhancement for U.S. participants than for Chinese participants. U.S. participants who were identified as having strong independent self-construal exhibited more moral self-enhancement compared to their interdependent counterparts. In contrast, for Chinese participants, independents and interdependents did not seem to differ significantly in moral self-enhancement. As for hypothesis 4, SDE was significantly greater for independents in the Chinese participants and marginally greater in the U.S. sample. For both U.S. and Chinese participants, independents and interdependents did not differ in their self-reported levels of IM. Hence hypothesis 4 was also partially supported.

Hypothesis 5

Hypothesis 5 tested the big picture of how self-deception and self-construal together influence individuals' moral self-enhancement. Separate regression analyses

were conducted for U.S. and Chinese participants in an attempt to examine the unique predicting power of self-deception and self-construal for the two groups respectively.

As revealed in Table 10, the regression model for U.S. participants was significant ($F(4, 126) = 12.77, p < .001$). In line with the initial hypothesis, both SDE and independent self-construal were significant predictors of moral self-enhancement. IM and interdependent self-construal did not demonstrate significant relationship to moral self-enhancement. The regression model for Chinese participants as shown in Table 11 was not significant ($F(4, 106) = 1.46, p < .22, ns$), indicating that there was no significant effect of self-deception and self-construal on moral self-enhancement.

Table 10

Summary of Multiple Regression Analyses on Moral Self-Enhancement for U.S.

Participants

Variables	U.S.				
	R^2	F	B	$SE B$	β
	.30	12.77***			
IND			.26	.48	.26**
INTER			-.01	.07	-.01
SDE			.09	.02	.43***
IM			-.01	.02	-.06

Note. ** $p < .01$. *** $p < .001$.

Table 11
Summary of Multiple Regression Analyses on Moral Self-Enhancement for Chinese Participants

Variables	China				
	R^2	F	B	$SE B$	β
	.05	1.46			
IND			-.17	.10	-.25
INTER			.20	.09	.32*
SDE			-.02	.02	-.11
IM			.022	.02	.11

Note. * $p < .05$.

The absence of significant relationships between moral self-enhancement and predictor variables (self-deception and self-construal) for Chinese participants as revealed in testing hypothesis 5 were consistent with results of correlational analysis. As noted earlier, however, correlational analysis also revealed significant relationships between self-construal, self-deception and rating of others as well as between the predictor variables and rating of self. Taking all these findings into consideration, one may ask whether the composite score, which was yielded by subtracting raters' evaluation of others from his or her self-ratings, was a good indicator of moral self-enhancement for the Chinese sample. To seek an answer to this question and further decompose the relationships between self-construal, self-deception, and moral self-enhancement for Chinese participants, additional analyses were conducted. Rating of self and rating of others were entered into regression equations as outcome variables with an attempt to examine how self-construal and self-deception affected Chinese participants' self-evaluations and their evaluations of others respectively.

The results of the additional regression analyses (Table 12) indicated that independent self-construal had a significant positive effect on both Chinese participants' self-evaluation ($\beta = .26, p < .05$) and their evaluations of other people ($\beta = .49, p < .001$). And quite unexpectedly, SDE was also positively associated with participants' evaluations of others ($\beta = .28, p < .05$).

Table 12

Multiple Regression of Self-Deception and Self-Construal on Rating of Self for Chinese Participants

Variables	Rating of self					Rating of others				
	R^2	F	B	$SE B$	β	R^2	F	B	$SE B$	β
IND	.30	10.81**	.21	.10	.26*	.31	11.53**	.38	.09	.49**
INTER			.10	.09	.15			-.09	.08	-.14
SDE			.03	.02	.18			.05	.02	.28*
IM			.03	.02	.13			.01	.02	.04

Note. * $p < .05$. ** $p < .001$.

While regression analyses revealed significant relationships between independent self-construal, SDE and the two components of moral self-enhancement (i.e., self-evaluation and evaluation of others), it remained unclear how these findings together contributed to an understanding of how Chinese participants self-enhance morally. Moreover, as discussed earlier in the chapter, while both Chinese and U.S. participants tended to evaluate themselves more favorably than others, the former were more likely to rate other people favorably than did the latter. How does this observation help solve the puzzle? In other words, what role did rating of others play in moral self-enhancement for Chinese participants? Therefore, additional analyses were conducted to test whether the

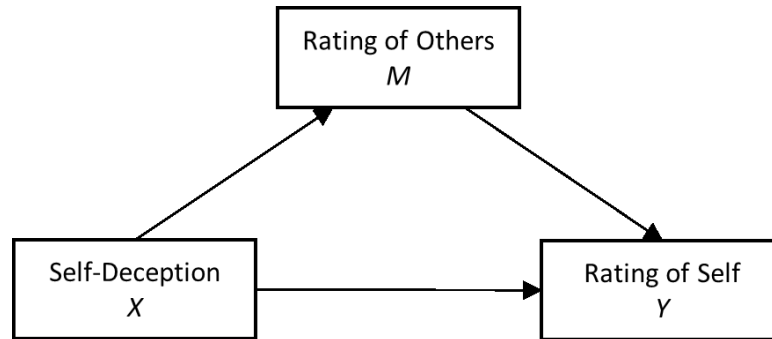
potential pathway linking self-construal and self-deception to enhanced moral self-image may be via a favorable rating of others.

The results of the above-described regression analyses showed that independent self-construal had significant influences on both rating of self and rating of others, whereas SDE had significant effect on rating of others. Based on these findings, it was hypothesized that rating of others has a mediating effect on the relationship between participants' rating of self and SDE.

Mediation analyses were conducted to explore the hypothesized mediating effect following the procedure outlined by Baron and Kenny (1986). Baron and Kenny (1986) proposed a four-step approach to establishing mediation using regression equations: (1) conduct a simple regression analysis with predictor (X) predicting criterion variable (Y) to establish that there is an effect that may be mediated; (2) conduct a simple regression analysis with X predicting hypothesized mediator (M); (3) conduct a simple regression analysis with M predicting Y; (4) conduct a multiple regression analysis with X and M predicting Y to establish that X no longer affects Y and that M completely mediates the relationship between X and Y. The effects in both steps 3 and 4 are estimated in the same equation (Figure 2). A complete mediation effect is said to have occurred if all four of the above-mentioned steps are met. If the first three steps are met but Step 4 is not, then partial mediation is indicated.

Figure 2

Rating of Others as Mediator in the Relationship between Rating of Self and Self-Deception for Chinese Participants



To explore the mediating role of rating of others in the relationship between rating of self and SDE for Chinese participants (Table 13), rating of self was first regressed on SDE in the first equation and the relationship was significant ($\beta = .41, p < .001$). Next, rating of others was regressed on SDE ($\beta = .39, p < .001$). Finally, rating of self was regressed on both rating of others and SDE. Results indicated that both SDE and rating of others remained significant ($\beta = .21, p < .05$ and $\beta = .52, p < .001$ respectively), suggesting that Chinese participants' rating of others partially mediated the influence of SDE on rating of self. The significance of this partial mediating effect was tested and confirmed by Sobel's test, yielding a z score of 3.02, $p < .01$.

Table 13

Mediation Analysis of Rating of Self, SDE and Rating of Others for Chinese Participants

	Rating of self ^a			Rating of others ^b			Rating of self ^c		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
SDE	.07	.02	.41***	.07	.02	.39***	.04	.02	.21*
Rating of others							.54	.09	.52***

Note. ^a $R^2 = .17$, $F(1, 105) = 21.45$, $p < .001$ for the first equation. ^b $R^2 = .15$, $F(1, 105) = 19.01$, $p < .001$ for the second equation. ^c $R^2 = .39$, $F(1, 105) = 33.85$, $p < .001$ for the third equation. * $p < .05$. ** $p < .01$. *** $p < .001$.

Chapter V: DISCUSSION

This chapter presents discussion, implications, and limitations of the current study and potential directions for future research. The first section of the chapter provides an analysis of research findings, followed by a discussion of some limitations. The implications for moral education and suggestions for future research are presented in the last section.

This study examines the moral self-enhancement effect, which describes a discrepancy between ratings of self and others related to attributions in the moral domain. While the data reported in this study are self-report there are several studies using other procedures that strongly suggest this discrepancy is caused by an enhancement of self-attributions. For example, using an experimental procedure Epley & Dunning (2000) determined self-serving assessment to overly favorable views of the self in contrast to more accurate judgment of peers (see also Alicke & Govorun, 2005; Alicke et al, 2001; Balcetis et al, 2008). In other words, previous research, almost entirely in western countries, finds that individuals tend to be more or less accurate in their assessments of others while inflating or enhancing their own attributions. Hence the discrepancy is referred here and in the literature as a *self*-enhancement effect or, alternately, a *self*-serving bias.

The Cultural Understanding of Moral Self-Enhancement

As noted earlier, extant literature has documented a claim that self-enhancement is a culture-specific effect that only stems from a culture of individualism (Heine et al, 1999; Heine, 2003, 2005). It is reasoned that individualistic cultures, which emphasize independence, autonomy, and agency, encourage members of these cultures to maintain

positive self-concept (Triandis, 1995). Likewise, independent self-construal, which is prevalent in individualistic cultures, defines the self in terms of personal uniqueness and separation from others (Markus & Kitayama, 1991; Triandis, 1989). Thus, it is not unreasonable to think a greater emphasis on individual autonomy and agency would be associated with an enhancement of rating of self-attributes relative to the rating of others. In contrast, collectivistic cultures are associated with the notion of interdependent self-construal that underscores individuals' relationships and connectedness to others. In this case, as some have suggested, less individualistic cultures might be less likely to enhance their self attributes and so may not show a significant enhancement effect (Heine et al, 1999; Heine, 2003, 2005). A strong form of this cultural hypothesis might claim that an individualistic worldview accounts completely for the enhancement effect so that in collectivistic cultures enhancement effects would disappear. Lacking any other explanation this cultural hypothesis has much to recommend it. However, there already is some empirical evidence that shows an association between a form of self-enhancement and interdependent self-construal (Sedikides et al, 2003). Given this association, the question also arises as to how to best explain any cultural variations by applying both a cultural and evolutionary framework.

The Evolutionary Understanding of Moral Self-Enhancement

The first goal of the current study was to provide an evolutionary account of moral self-enhancement. An evolutionary understanding would argue that self-enhancement is a universal motivation that evolves as a psychological adaptation to the social environment (Trivers, 1976). In competition for the benefits of cooperation in our social environment, those who are perceived altruistic and cooperative are more likely to

be awarded with returned benefits from others (Trivers, 1976). Self-enhancement thus serves the purpose of obtaining the benefits of altruism by allowing people to advertise themselves as a better cooperator than the average. Moreover, self-enhancement helps boost individuals' confidence through unconscious processes creating a self-image that is better than is objectively warranted, which in turn increases the chances that they will gain more social influence (von Hippel & Trivers, 2011).

Clearly, the results of this study provide support for the evolutionary view of self-enhancement, showing that moral self-enhancement exists regardless of individuals' cultural background and, importantly, their self-construal. Specifically, both participants from the U.S. and China demonstrated a significant discrepancy between their self-ratings and their ratings of others. Moreover, the ratings of self-construal do not support the cultural hypothesis as stated above. While the US sample scored higher on independent self-construal and the Chinese higher on interdependent, interdependent self-construal did not significantly diminish self-enhancement in the collectivist (e.g., Chinese) culture. While the data supported the existence of a strong moral self-enhancement effect in both samples, the results also showed the moderating effect of culture on moral self-enhancement. In particular, U.S. participants in general were more likely to morally self-enhance than their Chinese counterparts which supports the claim that an individualistic culture may be part of the explanation for an enhancement effect. Together, these findings supported the evolutionary hypotheses regarding the universality of moral self-enhancement while at the same time provided evidence for the cultural variations in its manifestation.

To examine moral self-enhancement more closely at an individual level, participants were categorized as either having a strong independent self-construal or a strong interdependent self-construal. The hypothesis that moral self-enhancement serves a universal need would again be supported if moral self-enhancement is observed in both strong independents and strong interdependents. The findings clearly supported this prediction for U.S. participants, i.e., individuals identified as strong independents and those identified as strong interdependents both evaluated their own character and sense of responsibility more favorably than those of others.

In contrast, the discrepancy between rating of self and rating of others for Chinese participants was observed only in individuals identified as strong interdependents and not in individuals identified as strong independents. The absence of significant findings with participants with strong independents might be due to its small sample size ($n=10$), which made it difficult to detect any statistically significant difference. The observation of moral self-enhancement in strong interdependents provides further evidence against the claim that the motivation to emphasize personal independence and uniqueness might be the primary explanation for self-enhancement. Rather, could it be that the importance of social relationships and sense of interdependence stressed by interdependent self-construal may also motivate individuals who score high on it to unconsciously see themselves as excelling on the traits (e.g., good cooperators) that enable them to better adjust to social contexts and fit in one's group? While Sedikides et al (2003) provide a cultural explanation for a related finding in regard to interdependence and self-enhancement, could there also be an evolutionary explanation for this cultural variation?

Self-Deception and Moral Self-Enhancement

As discussed above, self-enhancement entails an evolutionary benefit, which explains the universal need for this motivation. However, the self-enhancing process does not need to be conscious. Rather, it would be likely to work more effectively if it is unconscious, i.e., individuals are honestly convinced of their inflated moral enhancement. A review of recent literature adopting an evolutionary perspective has provided some clues on how people would deceive themselves in a self-other comparison by biasing their information processing (von Hippel & Trivers, 2011). Older research has even identified a range of psychological mechanisms available for individuals to appear moral but still serve self-interest (Bandura, 1991). Therefore, the current research informed by evolutionary theory would predict that there would be an association between self-deception and moral self-enhancement.

In this study self-deception was examined in two forms: self-deceptive enhancement (SDE) and impression management (IM). SDE depicts the tendency to describe one's positive attributes in an inflated yet honestly held manner (Paulhus & John, 1998), whereas IM refers to the practice of deliberately distorting self-description to maintain a favorable public image, which is often associated with lying and faking (Mick, 1996). Overall, SDE rather than IM stood out as a significant predictor of moral self-enhancement. Participants who experienced high levels of SDE were more likely to exhibit moral self-enhancement compared to those low in SDE, which provides strong support for the evolutionary explanation of moral self-enhancement. This finding is also clearly consistent with previous studies regarding the advantage of unconscious self-deception over conscious distortion of self-image (von Hippel & Trivers, 2011). Since

consciously mediated lies can be detected by telltale signs such as nervousness, physical indicators, or extra cognitive load, conscious, deliberate distortion of self-description as described by impression management may not be a good strategy for self-enhancing behavior. Rather, by unconsciously avoiding the truth, exaggerating the truth, or obfuscating the truth, biased information processing allows people to search for and present flattering information in a more self-convincing way, which in turn facilitates their efforts to convince others of their inflated self-image.

While the universal aspects of self-deception and moral self-enhancement are self-evident, this does not mean there are not also important cultural differences. Further examination of cultural difference revealed that the link between SDE and moral self-enhancement was stronger for U.S. participants than Chinese participants. Among U.S. participants, those who reported higher levels of self-deception as measured by SDE display greater moral self-enhancement compared to their peers who were low in SDE.

Analysis of the Chinese sample did not reveal any significant correlation between the composite scores of moral self-enhancement and either SDE or IM. At first glance, such result seems in contradiction with the argument that self-deception is associated with moral self-enhancement. A review of the data analysis procedure, however, already provided clues for a different interpretation of moral self-enhancement among U.S. and Chinese participants. For U.S. participants, moral self-enhancement was achieved through direct self-advancement, i.e., they gave significantly more favorable evaluation of their own moral self-image than those of others. The more favorably participants rated themselves, the greater the discrepancy between rating of self and rating of others, and the more moral self-enhancement was observed.

In contrast, the self-enhancing efforts of Chinese participants seemed to involve not only inflated self-views but also enhanced judgment of other people under comparison. As noted above, findings of some earlier studies have indicated that both individualist and collectivists are roughly accurate in predicting their peers' behavior (Balceits et al, 2008). And the reason for the relative accuracy in social-judgment was that when considering the behavior of others, people in general are more likely to base their prediction on objective criterion such as base rate information and thus result in more accurate predictions (Epley & Dunning, 2000). As revealed in this study, however, Chinese participants reported significantly higher rating of others than did their U.S. counterparts (Table 3). The correlation analysis also showed positive relationship between rating of self and rating of others among Chinese participants, suggesting those who had favorable self-views would also be more positive in their judgment of other people. Moreover, SDE was found to be positively related to both rating of self and rating of others, but not the composite score. That is, high levels of SDE are associated with more favorable judgment of the self *and* more favorable judgment of others; low levels of SDE are associated with less inflated views of the self and of others. These findings may then provide further support for an evolutionary account of moral self-enhancement by suggesting that in addition to self-enhancement, there is perhaps an effect of *other-enhancement* in Chinese participants.

In fact, some researchers have suggested that regard for others is associated with distinctive psychological and social concerns for members of collectivistic cultures (Bond et al, 2000). For members of collectivistic cultures such as China, regard for others is conceptually related to consideration of protecting other's "faces" and so it is culturally

desirable to communicate positive information about other people (Bond et al, 2000). In addition, since the nature of collectivistic culture encourages its members to restrain self rather than to stand out (Heine et al, 1999; Markus & Kitayama, 1991), an explicit expression of superiority over others is likely to be negatively perceived across the communal dimension of personality (Bond et al, 2000). While there seems to be the conflict between the natural tendency to self-enhance and the motivation to fit in one's social context, such conflict could potentially be resolved through a slight elevation of regard for other peoples. By expressing inflated self-regard while at the same time displaying a moderately inflated judgment of others, people are allowed to achieve self-enhancement without the concern of risking social harmony or losing social acceptance. Taking these factors into consideration, it is reasonable to expect that rating of others may play an important role in the way Chinese participants morally self-enhance. The results of mediation analysis provide further support by showing that the link between self-deception and rating of self was mediated by a favorable rating of others among Chinese participants. These results provide further insight into the mechanism that associates SDE with moral self-enhancement, suggesting that Chinese participants' motivation to morally self-enhance while also protecting social harmony and social acceptance by displaying their positivity toward others. Perhaps, the term "moral self-enhancement" for Chinese participants needs to be redefined to include both enhancement of self and others

Self-Construal, Self-deception and Moral Self-Enhancement

Self-construal was examined to help understand cultural differences in moral self-enhancement and self-deception at the individual level. In the current study, within-

group comparisons revealed different patterns of moral self-enhancement among U.S. and Chinese participants. In the U.S. sample, aligned with the cultural explanation for self-enhancement, individuals with strong independent self-construal were significantly more likely to self-enhance compared to those with strong interdependent self-construal. In contrast, strong independents and strong interdependents in the Chinese sample did *not* seem to differ in their manifestation of moral self-enhancement.

Researchers examining the cultural variations in the demonstration of self-deception often associate collectivists with IM (Triandis, 1995; Triandis & Suh, 2002) and individualists with SDE (Heine & Lehman, 1995; Heine et al, 1999; Lalwani et al, 2006). The link between collectivists/interdependents and IM did not seem to emerge in the current study. However, the relationship between SDE and strong independents, who were more likely to morally self-enhance, was replicated in both U.S. and Chinese samples, which is again supportive of the initial evolutionary hypothesis that self-enhancement is an unconscious process intimately related to self-deception.

Challenges for Moral Education

Results of the current study demonstrated that people in general tend to fall victim to moral self-enhancement and self-deception. Consistent with extant literature these findings suggest that people are to some significant degree self-deceptive about their ability to behave morally. For example, in a previous study participants consistently overestimated the likelihood that they would redistribute a reward, donating money, or avoiding rude behavior (Balcetis et al, 2008) and those in another study were found to actually buy fewer flowers in a charity event than they initially self-predicted (Epley & Dunning, 2000). More extreme findings were revealed in moral hypocrisy research

(Batson & Collins, 2011; Batson et al, 1997), in which people made selfish choices while at the same time avowing firm belief in fairness.

On the other hand, there is evidence that moral education can help achieve the goal of instilling moral ideals within young people. Researchers have found that teaching moral values and principles increases the likelihood that individuals see a decision as moral-concern-laden (Tenbrunsel & Messick, 2004) and helps foster one's concern for others' interests (Lu & Chang, 2011). However, such awareness does not necessarily lead to alignment of behavior with moral standards. Rather, the unconscious mechanism of self-deception enables people to ease the tension between pursuit of self-interest and maintenance of moral self-image and still feel morally good about themselves. Since these findings are so recent, their practical implications will need to be addressed with further research. The challenges will be daunting given the rapid and unconscious processing of MSE and SDE. Therefore, perhaps before instilling commitment to genuine moral behavior in young people, moral educators will first need to make students aware of their moral limitations and biases and seek ways to help them overcome them.

Limitations of the Study

There are some limitations to the current study. First, both U.S. and Chinese participants were recruited using convenience sampling method. As noted earlier, most U.S. participants are education majors, whereas Chinese participants have academic background exclusively in business management and economics. Character and sense of responsibility may derive different meanings and arouse distinctive emotions in these two samples, which may have affected the results. Second, the relatively modest number of participants in the current study has limited the power of statistical analyses and may

have contributed to the nonsignificant findings, particularly the absence of clear moral self-enhancement effect in strong independents in the Chinese sample. Third, the self-report measure has limited effectiveness in capturing individuals' true feeling about themselves. To take one example, previous research has found that collectivists think of themselves more in context-bound social roles and behavior rather than in terms of specific traits (Suh, 2002). Thus, the Chinese participants could actually have experienced more moral self-enhancement than appeared in their responses to general-toned, trait-based survey questions.

Conclusion

Testing an evolutionary framework, the current study examined moral self-enhancement in relation to self-deception and self-construal. As hypothesized, the evidence demonstrated that self-enhancement was not a characteristic unique to individualistic ideology but rather a universal motivation. Regardless of their cultural background and self-construal, participants tended to morally self-enhance, showing great discrepancy between their self-ratings and their ratings of others. Cultural variations were also identified as U.S. participants were more likely to self-enhance compared to their Chinese counterparts. At the individual level, strong independents in the U.S. sample were found to demonstrate greater moral self-enhancement than their interdependent peers. The observation of moral self-enhancement in Chinese strong interdependents indicated that collectivistic values may also motivate individuals to present themselves as excelling on traits that enable them to fulfill their cultural ideal of interdependence. The association between self-deception and moral self-enhancement provides additional support for the evolutionary account of moral self-enhancement, as

unconscious self-deception can better serve the goal of self-enhancement than conscious distortion of self-image. In addition, among Chinese participants, the link between moral self-enhancement and self-deception was found to be mediated through favorable ratings of others, indicating a potential other-enhancement effect. Hence a more accurate term for moral self-enhancement for Chinese participants might be simply “moral enhancement” that includes enhancement of both self and other.

This study adds to a growing literature investigating general psychological and behavioral patterns from an evolutionary standpoint. It also helps illuminate the nature of a self-enhancing motive in terms of its relation with self-deception and explain the cultural variations in the manifestation of moral enhancement. In addition, the research findings will likely have important implications in contemporary practices of moral education. Given that the current study is correlational in nature, future research would benefit from experimental design that explores causal relationships between self-enhancement and self-deception. Moral self-enhancement or moral enhancement as measured in the current study focuses on character and sense of responsibility. Thus, those interested in moral self-enhancement in particular could extend their research efforts to studying morality-laden traits or behaviors that might elicit distinctive reactions among people of different cultural background. Age may also play an important role and is worth looking into. Studies that investigate the moral self-representation of young children and adolescents will provide important implications for theorists, educational practitioners, and all other stakeholders who are determined to promote genuine moral development and character building in next generation. Last but not least, future efforts

will be needed to further investigate the mechanism of other-enhancement and its significance in the moral self-enhancement of people in collective cultures.

REFERENCES

- Alicke, M. D., & Sedikides, C. (2010). Self-enhancement and self-protection: Historical overview and conceptual framework. In M. D. Alicke & C. Sedikides (Eds.), *Handbook of self-enhancement and self-protection* (pp. 1-19). New York: Guilford Press.
- Alicke, M. D., & Govorun, O. (2005). The better-than-average effect. In M. D. Alicke, J. I. Krueger, & D. A. Dunning (Eds.), *The self in social judgment* (84-106). Psychology Press.
- Alicke, M. D., & Sedikides, C. (2009). Self-enhancement and self-protection: What they are and what they do. *European Review of Social Psychology*, *20*, 1-48.
- Alicke, M.D., Vredenburg, D.S., Hiatt, M., & Govorun, O. (2001). The better than myself effect. *Motivation and Emotion*, *25*, 7-22.
- Allison, S. T., Messick, D. M., & Goethals, G. R. (1989). On being better but not smarter than others: The Muhammad Ali effect. *Social Cognition*, *7*, 275-295.
- Anderson, C. A. (1999). Attributional style, depression, and loneliness: A cross-cultural comparison of American and Chinese students. *Personality and Social Psychology Bulletin*, *25*, 482-499.
- Arkin, R. M. & Baurngardner, A. H. (1985). Self-handicapping. In J. H. Harvey & G. Weary (Eds.), *Attribution: Basic issues and applications* (pp. 169-202). San Diego, CA: Academic Press.
- Axelrod, R. (1984). *The evolution of cooperation*. New York: Basic Books.

- Balcielis, E., Dunning, D., & Miller, R. (2008). Do collectivists “know themselves” better than individualists? Cross-cultural studies of the “holier than thou” phenomenon. *Journal of Personality and Social Psychology, 95*, 1252-1267.
- Batson, C. D., & Collins, E. C. (2011). Moral hypocrisy: A self-enhancement/self-protection motive in the moral domain. In M. D. Alicke & C. Sedikides (Eds.), *Handbook of self-enhancement and self-protection* (pp. 92-111). New York: Guilford Press.
- Batson, C. D., & Thompson, E. R. (2001). Why don't moral people act morally? Motivational consideration. *Current Directions in Psychological Science, 10*(2), 54-57.
- Batson, C.D., Kobrynowicz, D., Dinnerstein, J.L., Kampf, H.C., & Wilson, A.D. (1997). In a very different voice: Unmasking moral hypocrisy. *Journal of Personality and Social Psychology, 72*, 1335–1348.
- Batson, C. D., Thompson, E. R., Seufferling, G., Whitney, H., & Strongman, J. (1999). Moral hypocrisy: Appearing moral to oneself without being so. *Journal of Personality and Social Psychology, 77*, 525–537.
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A., & Tipton, S. M. (1985). *Habits of the heart: Individualism and commitment in American life*. Berkeley: University of California Press.
- Bonanno, G.A., & Kaltman, S. (2001). The varieties of grief experience. *Clinical Psychology Review, 21*, 705–734.

- Bonanno, G. A., Field, N. P., Kovacevic, A., & Kaltman, S. (2002). Self-enhancement as a buffer against extreme adversity: Civil war in Bosnia and traumatic loss in the United States. *Personality and Social Psychology Bulletin*, *28*, 184–196.
- Bonanno, G.A., Rennie, C., & Dekel, S. (2005). Self-enhancement among high-exposure survivors of the September 11th terrorist attack: *Resilience or social maladjustment?* *Journal of Personality and Social Psychology*, *88*, 984–998.
- Bond, M. H., Leung, K., & Wan, K. C. (1982). The social impact of self-effacing attributions: The Chinese case. *Journal of Social Psychology*, *118*, 157–166.
- Brislin, R. W. (1986). The wording and translation of research instruments. In W. J. Lonner & J. W. Berry (Eds.), *Field methods in cross-cultural psychology* (pp. 137-164). Beverly Hills, CA: Sage.
- Brown, J. D. (1986). Evaluations of self and others: Self-enhancement biases in social judgment. *Social Cognition*, *4*, 353-376.
- Brown, J. D., & Kobayashi, C. (2002). Self-enhancement in Japan and America. *Asian Journal of Social Psychology*, *5*, 145-167.
- Cialdini, R. B., & Richardson, K. D. (1980). Two indirect tactics of impression management: Basking and blasting. *Journal of Personality and Social Psychology*, *39*, 406-415.
- Colvin, C. R., & Griffo, R. (2008). On the psychological costs of self-enhancement. In E. C. Chang (Ed.), *Self-criticism and self-enhancement: Theory, research, and clinical implications* (pp. 123-140). Washington, DC: American Psychological Association.

- Critcher, C. R., Helzer, E. G., & Dunning, D. (2011). Self-enhancement via redefinition: Defining social concepts to ensure positive views of the self. In M. D. Alicke & C. Sedikides (Eds.), *Handbook of self-enhancement and self-protection* (69-91). New York: Guilford Press.
- Crocker, J. (2002). Contingencies of self-worth: Implications for self-regulation and psychological vulnerability. *Self and Identity, 1*, 143-149.
- Coon, H. M., & Kimmelmeier, M. (2001). Cultural orientations in the United States: (Re)examining differences among ethnic groups. *Journal of Cross-Cultural Psychology, 32*, 348-364.
- Damarin, F., & Messick S. (1965). *Response styles as personality variables: A theoretical integration* (ETS RB 65-10). Princeton, NJ: Educational Testing Service.
- Darwin, C. (1871). *The descent of man, and selection in relation to sex*. London: John Murray.
- Dawkins, R. (1976). *The selfish gene*. Oxford: Oxford University Press.
- DePaulo, B. M., & Kashy, D. A. (1998). Everyday lies in close and causal relationships. *Journal of Personality and Social Psychology, 74*(1), 63-79.
- DePaulo, B. M., Kashy, D. A., Kirkendol, S. E., Wyer, M. M., & Epstein, J. A. (1996). Lying in everyday life. *Journal of Personality and Social Psychology, 70*, 979-995.

- De Vos, G. A. (1985). Dimensions of the self in Japanese culture. In A. J. Marsella, G. De Vos, & F. L. K. Hsu (Eds.), *Culture and self: Asian and Western perspectives* (pp. 141–182). New York: Tavistock.
- Deweese-Boyd, I. (Fall, 2010). Self-Deception. In *The Stanford Encyclopedia of Philosophy* online. Retrieved from <http://plato.stanford.edu/archives/fall2010/entries/self-deception/>.
- Diener, E., & Seligman, M. E. P. (2002). Very happy people. *Psychological Science, 13*, 80-83.
- Dorner, L. M., Orellana, M. F., & Jimenez, R. (2008). 'It's one of those things that you do to help the family: Language brokering and the development of immigrant adolescents. *Journal of Adolescent Research 23*(5), 515–43.
- Edwards, A. L., Diers, C. J., & Walker, J. N. (1962). Response sets and factor loadings on sixty-one personality scales. *Journal of Applied Psychology, 46*, 220-225.
- Epley, N., & Dunning, D. (2000). Feeling “Holier than thou”: Are self-serving assessments produced by errors in self or social prediction? *Journal of Personality and Social Psychology, 79*, 861-875.
- Finch, J. R., & Cialdini, R. B. (1989). Another indirect tactic of (self) image management: Boosting. *Personality and Social Psychology Bulletin, 15*, 222-232.
- Flynn, F. J., & Lake, V. K. B. (2008). If you need help, just ask: Underestimating compliance with direct requests for help. *Journal of Personality and Social Psychology, 95*, 128 - 143.

- Freedman, J. (1978). *Happy people: What happiness is, who has it, and why*. New York: Harcourt Brace Jovanovich.
- Gelfand, M. J., Triandis, H. C., & Chan, D. K-S. (1996). Individualism versus collectivism or versus authoritarianism? *European Journal of Social Psychology*, 26, 397-410.
- Gorsuch, R. (1983). *Factor analysis*. Hillsdale, NJ: L. Erlbaum Associates.
- Greenberg, J. (2008). Understanding the vital human quest for self-esteem. *Perspectives on Psychological Science*, 3, 48–55.
- Greenberg, J., Solomon, S., & Pyszczynski, T. (1997). Terror management theory of self-esteem and cultural worldviews: Empirical assessments and cultural refinements. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 29, pp. 61–139). San Diego, CA: Academic Press.
- Greenwald, A. G. (1980). The totalitarian ego: Fabrication and revision of personal history. *American Psychologist*, 35, 603-618.
- Greenwald, A. G., & Breckler, S. J. (1985). To whom is the self presented? In B. R. Schlenker (Ed.), *The self and social life*. New York: McGraw-Hill.
- Greve, W., & Wentura, D. (2010). True lies: Self-stabilization without self-deception. *Consciousness and Cognition*, 9(3), 52-80.
- Heine, S. J. (2003a). An exploration of cultural variation in self-enhancing and self-improving motivations. In V. Murphy-Berman & J. J. Berman (Eds.), *Nebraska Symposium on Motivation: Vol. 49. Cross-cultural differences in perspectives on the self* (pp. 101–128). Lincoln: University of Nebraska Press.

- Heine, S. J. (2003b). Optimal is as optimal does. *Psychological Inquiry*, *14*, 41–43.
- Heine, S. J. (2005). Where is the evidence for pancultural self-enhancement?: A reply to Sedikides, Gaertner, and Toguchi (2003). *Journal of Personality and Social Psychology*, *89*, 531–538.
- Heine, S. J., & Lehman, D. R. (1997). Culture, dissonance, and self-affirmation. *Personality and Social Psychology Bulletin*, *23*, 389–400.
- Heine, S. J., Lehman, D. R., Markus, H. R., & Kitayama, S. (1999). Is there a universal need for positive self-regard? *Psychological Review*, *106*, 766-794.
- Heine, S. J., Takata, T., & Lehman, D. R. (2000). Beyond self-presentation: Evidence for self-criticism among Japanese. *Personality and Social Psychology Bulletin*, *26*, 71-78.
- Hill, T., Smith, N. D., & Lewicki, P. (1989). The development of self-image bias: A real-world demonstration. *Personality and Social Psychology Bulletin*, *15*, 205-211.
- Hofstede, G. (1980). *Culture's consequences*. Thousand Oaks, CA: Sage.
- Hoorens, V., & Buunk, B. P. (1993). Social comparison of health risks: Locus of control, person positivity bias, and unrealistic optimism. *Journal of Applied Social Psychology*, *23*, 291-302.
- Hui, C. H., & Triandis, H. C. (1986). Individualism and collectivism: A study of cross-cultural researchers. *Journal of Cross-Cultural Psychology*, *17*, 225-248.
- Jackson, D. N., & Messick, S. (1962). Response styles on the MMPI: Comparison of clinical and normal samples. *Journal of Abnormal and Social Psychology*, *65*, 285-299.

- Johnston, C., & Lee, C. M. (2005). Children's attributions for their versus others' behavior: Influence of actor versus observer differences. *Journal of Applied Developmental Psychology: An International Lifespan Journal*, 26(3), 314-328.
- Kobayashi, C., & Greenwald, A. G. (2003). Implicit-explicit differences in self-enhancement for Americans and Japanese. *Journal of Cross-Cultural Psychology*, 34, 522-541.
- Kuiper, N. A., & MacDonald, M. R. (1982). Self and other perception in mild depressives. *Social Cognition*, 1, 233-239.
- Kurman, J., & Sriram, N. (1997). Self-enhancement, generality of self-evaluation, and affectivity in Israel and Singapore. *Journal of Cross-Cultural Psychology*, 28, 421-441.
- Lalwani, A. K., Shavitt, S., & Johnson, T. (2006). What is the relation between cultural orientation and socially desirable responding? *Journal of Personality and Social Psychology*, 90(1), 165-178.
- Lalwani, A. K., Shrum, L. J., & Chiu, C. (2009). Motivated response styles: The role of cultural values, regulatory focus, and self-consciousness in socially desirable responding. *Journal of Personality and Social Psychology*, 96(4), 870-882.
- Leary, M. R. (1999). The social and psychological importance of self-esteem. In R. M. Kowalski & M. R. Leary (Eds.), *The social psychology of emotional and behavioral problems: Interfaces of social and clinical psychology* (pp. 197-221). Washington, DC: American Psychological Association.

- Leary, M. R., Tchividjian, L. R., & Kraxberger, B. E. (1994). Self-presentation can be hazardous to your health: Impression management and health risk. *Health Psychology, 13*, 461-470.
- Lu, H. J., & Chang, L. (2011). The association between self-deception and moral self-concept as functions of self-consciousness. *Personality and Individual Differences, 51*, 845-849.
- Lyubomirsky, S., King, L.A., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin, 131*, 803–855.
- Markus, H. R., & Kitayama, S. (1991a). Cultural variation in the self-concept. In G. R. Goethals & J. Strauss (Eds.), *Multidisciplinary perspectives on the self* (pp. 18–48). New York: Springer-Verlag.
- Markus, H. R., & Kitayama, S. (1991b). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224–253.
- Markus, H. R., Mullally, P., & Kitayama, S. (1997). Selfways: Diversity in modes of cultural participation. In U. Neisser & D. A. Jopling (Ed.), *The conceptual self in context: Culture, experience, self-understanding* (pp.13–61). Cambridge, England: Cambridge University Press.
- Mele, A. R. (1997). Real self-deception. *Behavioral and Brain Sciences, 20*, 91-102.
- Mick, D. G. (1996). Are studies of dark side variables confounded by socially desirable responding? The case of materialism. *Journal of Consumer Research, 23*, 106–119.
- Miller, D. T. (1999). The norm of self-interest. *American Psychologist, 54*, 1053-1060.

- Miller, D. T., & Ross, M. (1975). Self-serving biases in the attribution of causality: Fact or fiction? *Psychological Bulletin*, *82*, 213-225.
- Murray, S. L., Holmes, J. G., & Griffin, D. (1996). The benefits of positive illusions: Idealization and the construction of satisfaction in close relationships. *Journal of Personality and Social Psychology*, *70*, 79–98.
- Nisbett, R. E., & Norenzayan, A. (2002). Culture and cognition. In H. Pashler & D. L. Medin (Eds.), *Stevens Handbook of Experimental Psychology : Cognition* (3d Ed., Vol. 2) (pp. 561-597). New York: John Wiley & Sons.
- Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. 2001. Culture and systems of thought: Holistic versus analytic cognition. *Psychological Review*, *108*, 291-310.
- Okasha, S. (2009), Biological altruism. In E.N. Zalta (Ed.), *The Stanford encyclopedia of philosophy* (Winter 2009 Edition). Retrieved from <http://plato.stanford.edu/archives/win2009/entries/altruism-biological/>
- Paluch, S. (1967). Self-Deception. *Inquiry*, *10*, 268–278.
- Paulhus, D. L (1984). Two-component models of socially desirable responding. *Journal of Personality and Social Psychology*, *46*, 598-609.
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17-59). San Diego: Academic Press.
- Paulhus, D. L., & John, O. P. (1998). Egoistic and moralistic bias in self-perceptions: The interplay of self-deceptive styles with basic traits and motives. *Journal of Personality*, *66*, 1025-1060.

- Perloff, L. S., & Fetzer, B. K. (1986). Self-other judgments and perceived vulnerability of victimization. *Journal of Personality and Social Psychology*, *50*, 502-510.
- Pinker, S. (2011). *The better angels of our nature: Why violence has declined*. New York: Viking Adult.
- Ross, M. (1989). Relation of implicit theories to the construction of personal histories. *Psychological Review*, *96*, 341-357.
- Sackeim, H. A., & Gur, R. C. (1979). Self-deception, other deception, and self-reported psychopathology. *Journal of Consulting and Clinical Psychology*, *47*, 213-215.
- Sedikides, C., Gaertner, L., & Vevea, J. L. (2005). Pancultural self-enhancement reloaded: A meta-analytic reply to Heine (2005). *Journal of Personality and Social Psychology*, *89*, 539-551.
- Sedikides, C., & Strube, M. J. (1997). Self-evaluation: To thine own self be good, to thine own self be sure, to thine own self be true, and to thine own self be better. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 29, pp. 209-269). New York: Academic Press.
- Sedikides, C., Gaertner, L., & Toguchi, Y. (2003). Pancultural self-enhancement. *Journal of Personality and Social Psychology*, *74*, 378-386.
- Sedikides, C., Gregg, A. P., & Hart, C. M. (2007). The importance of being modest. In C. Sedikides & S. Spencer (Eds.), *The self: Frontiers in social psychology* (pp. 163-184). New York: Psychology Press.
- Seegerstrom, S. C., & Roach, A. R. (2008). On the physical health benefits of self-enhancement. In E. C. Chang (Ed.), *Self-criticism and self-enhancement: Theory,*

- research, and clinical implications* (pp. 37-54). Washington, DC: American Psychological Association.
- Shamir, B., House, R. J. & Arthur, M. B. (1993). The motivational effects of charismatic leadership: A self-concept based concept. *Organizational Science* 4, 577–94.
- Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin*, 26, 622–644.
- Skowronski, J. L, Betz, A. L_ Thompson, C. P., & Shannon, L. (1991). Social memory in everyday life: The recall of self-events and other events. *Journal of Personality and Social Psychology*, 60, 831-843.
- Spindler, G. D., & Spindler, L. S. (1990). American mainstream culture. In G. D. Spindler & L. S. Spindler (Eds.), *The American cultural dialogue and its transmission* (pp. 22–41). New York: Falmer Press.
- Suh, E. M. (2002). Culture, identity consistency, and subjective well-being. *Journal of Personality and Social Psychology*, 83, 1378–1391.
- Taylor, S. E., & Armor, D. A. (1996). Positive illusions and coping with adversity. *Journal of Personality*, 64, 873–898.
- Taylor, S. E., & Brown J. D. (1988). Illusions and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103, 193-210.
- Tenbrunsel, A. E., & Messick, D. M. (2004). Ethical fading: The role of self deception in unethical behavior. *Social Justice Research*, 17(2), 223-236.
- Triandis, H.C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review*. 96(3), 506-520.

- Triandis, H. C. (1995). *Individualism and Collectivism*. Boulder, CO: Westview.
- Triandis, H. C. (2001). Individualism-collectivism and personality. *Journal of Personality, 69*(6), 907-924.
- Triandis, H. C. (2011). Culture and self-deception: A theoretical perspective. *Social Behavior and Personality, 39*(1), 3-14.
- Triandis, H. C., & Suh, E. M. (2002). Cultural influences on personality. *Annual Review of Psychology, 53*, 133–160.
- Trivers, R. L. (1971). The evolution of reciprocal altruism. *Quarterly Review of Biology, 46*, 35-57.
- Trivers, R. L. (1976). Preface. In R. Dawkins (Ed.), *The selfish gene*. Oxford: Oxford University Press.
- Trivers, R. L. (1985). *Social evolution*. Menlo Park, California: Benjamin Cummings.
- Trivers, R. L. (1991). Deceit and self-deception: The relationship between communication and consciousness. In: M. Robinson & L. Tiger (Eds.), *Man and beast revisited* (pp. 175-191). Washington, DC: Smithsonian.
- Trivers, R. L. (2000). The elements of a scientific theory of self-deception. *Annals of the New York Academy of Sciences 907*, 114–31.
- von Hippel, W., & Trivers, R. (2011). The evolution and psychology of self-deception. *Behavioral and Brain Sciences, 34*, 1-56.
- Vohs, K. D. & Schooler, J. W. (2007). The value of believing in free will: Encouraging a belief in determinism increases cheating. *Psychological Science, 19*, 49–54.

- Weinstein, N. D., & Klein, W. M. (1995). Resistance of personal risk perceptions to debiasing interventions. *Health Psychology, 14*, 132-140.
- Weinstein, N. D. (1980). Unrealistic optimism about future life events. *Journal of Personality and Social Psychology, 39*, 806-820.
- Wiggins, J. S. (1964). Convergences among stylistic response measures from objective personality tests. *Educational and Psychological Measurement, 24*, 419-427.
- Wright, R. (1994). *The moral animal: The new science of evolutionary psychology*. New York: Pantheon Books.
- Zarnoth, P. & Sniezek, J. A. (1997). The social influence of confidence in group decision making. *Journal of Experimental Social Psychology 33*, 345–66.

APPENDIX A: Moral Self-Enhancement Scale

The following items were developed to assess your moral self-perceptions and your perceptions of the morality of other people. There are no right or wrong answers to these questions, and your responses are anonymous, so please be as honest as you can. We would like you to first respond to some basic demographic questions. Please check the answers that apply to you.

What is your gender? Female Male
 What is your age? Under 20 20-29 30-39 40-49 Over 49
 What is the highest level of education that you have completed?
 High School Graduate Associate's Degree Bachelor's Degree Graduate Study
 What is your ethnic origin?
 White or Caucasian Black or African American Asian or Pacific Islander
 American Indian or Alaskan Native Other race

Please indicate the extent to which you agree or disagree with the following statements. Rate your reaction to each statement by writing a number to the **left** of each statement showing that you:

- 1 = Disagree Strongly
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Agree Strongly

- 1) Other people always have a clear awareness of what they're obligated to do, regardless of the situations.
- 2) Other people have always made their own decisions even in difficult situations, and have taken responsibility for their behavior.
- 3) I believe I always act as I should, even in those situations when difficult moral choices arise.
- *4) In difficult situations other people's character is likely to change.
- 5) I will take responsibility for what I do even in difficult situations.
- 6) I think that most people have a reliable character that remains constant in difficult situations.
- 7) I believe people always act as they should, even in those situations when difficult moral choices arise.
- *8) My character is likely to change in difficult situations.
- 9) I always have a clear awareness of what I'm obligated to do, regardless of the situations.
- *10) My character is quite easily influenced by the situations I find myself in.
- 11) I have always made my own decisions, even in difficult situations, and have taken responsibility for my behavior.
- 12) I consider myself to have a reliable character that remains constant in difficult situations.
- 13) People will take responsibility for what they do even in difficult situations.
- *14) People's character is quite easily influenced by the situations they find themselves in.

* Items keyed in the negative direction.

APPENDIX B: Self-Construal Scale

This scale was developed to measure the strength of independent and interdependent self-construals. Please indicate the extent to which you agree or disagree with the following statements. Rate your reaction to each statement by writing a number to the **left** of each statement showing that you:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Slightly Disagree
- 4 = Neutral
- 5 = Slightly Agree
- 6 = Agree
- 7 = Strongly Agree

- 1) ____ My personal identity independent of others, is very important to me. (IN)
- 2) ____ Speaking up during a class is not a problem for me. (IN)
- 3) ____ Having a lively imagination is important to me. (IN)
- 4) ____ If my brother or sister fails, I feel responsible. (INTER)
- 5) ____ Even when I strongly disagree with group members, I avoid an argument. (INTER)
- 6) ____ My happiness depends on the happiness of those around me. (INTER)
- 7) ____ I should take into consideration my parents' advice when making education/career plans. (INTER)
- 8) ____ I would offer my seat in a bus to my professor. (INTER)
- 9) ____ I often have the feeling that my relationships with others are more important than my own accomplishments. (INTER)
- 10) ____ It is important to me to respect decisions made by the group. (INTER)
- 11) ____ It is important for me to maintain harmony within my group. (INTER)
- 12) ____ Being able to take care of myself is a primary concern for me. (IN)
- 13) ____ I respect people who are modest about themselves. (INTER)
- 14) ____ I value being in good health above everything. (IN)
- 15) ____ I feel comfortable using someone's first name soon after I meet them, even when they are much older than I am. (IN)
- 16) ____ I prefer to be direct and forthright when dealing with people I've just met. (IN)
- 17) ____ I am the same person at home that I am at school. (IN)
- 18) ____ I will stay in a group if they need me, even when I'm not happy with the group. (INTER)
- 19) ____ I act the same way no matter who I am with. (IN)
- 20) ____ I am comfortable with being singled out for praise or rewards. (IN)
- 21) ____ I will sacrifice my self-interest for the benefit of the group I am in. (INTER)
- 22) ____ I have respect for the authority figures with whom I interact. (INTER)
- 23) ____ I enjoy being unique and different from others in many respects. (IN)
- 24) ____ I'd rather say "No" directly, than risk being misunderstood. (IN)

