

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Public Access Theses and Dissertations from the  
College of Education and Human Sciences

Education and Human Sciences, College of (CEHS)

---

12-2011

# Cultural Orientation and Drinking Behaviors among Chinese University Students

Shiyuan Wang

University of Nebraska-Lincoln, wang.shiyuan@huskers.unl.edu

Follow this and additional works at: <http://digitalcommons.unl.edu/cehsdiss>



Part of the [Educational Psychology Commons](#)

---

Wang, Shiyuan, "Cultural Orientation and Drinking Behaviors among Chinese University Students" (2011). *Public Access Theses and Dissertations from the College of Education and Human Sciences*. 133.

<http://digitalcommons.unl.edu/cehsdiss/133>

This Article is brought to you for free and open access by the Education and Human Sciences, College of (CEHS) at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Public Access Theses and Dissertations from the College of Education and Human Sciences by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

CULTURAL ORIENTATION AND DRINKING BEHAVIORS AMONG  
CHINESE UNIVERSITY STUDENTS

by

Shiyuan Wang

A THESIS

Presented to the Faculty of  
The Graduate College at the University of Nebraska  
In Partial Fulfillment of Requirements  
For the Degree of Master of Arts

Major: Educational Psychology  
Under the Supervision of Professor Douglas F. Kauffman

Lincoln, Nebraska

December 2011

# CULTURAL ORIENTATION AND DRINKING BEHAVIORS AMONG CHINESE UNIVERSITY STUDENTS

Shiyuan Wang, MA

University of Nebraska, 2011

Advisor: Douglas F. Kauffman

This study aimed to develop a cultural orientation instrument among Chinese university students and to investigate the relationship between cultural orientation and their drinking behaviors. Four research questions were raised regarding these two objectives. A sample of 1421 students from universities in Beijing, Kunming and Wuhan participated in this study. The final instrument included 67 items consisting of 10 factors that loaded on two second-order factors: Chinese and Western culture. Thus, four categories of cultural orientation (Traditional, Western, Bicultural and Marginal) emerged, confirming the applicability of Berry's acculturation theory in cultural orientation. The result also indicated that traditional oriented group had significantly less regular drinkers compared to other three categories.

## TABLE OF CONTENTS

CHAPTER 1. THEORY	1
General introduction	1
Studies of Cultural Value, Acculturation, and Cultural Orientation	2
Cultural value Theory	2
Acculturation	3
Cultural Orientation	7
Cultural Orientation and Drinking	9
The Present Study	9
Purpose of Study	9
Research Questions	10
CHAPTER 2. LITERATURE REVIEW	12
Unidimensional vs. Bidimensional Models of Acculturation	12
Multidimensional Models of Acculturation	14
Cultural Orientation Studies	23
Cultural Value Studies	25
Hostede's Theory and Related Studies	26
Triandis' Individualism-Collectivism model	29
Other Chinese Cultural Studies	32
The Framework of Present Study	38
Cultural Orientation and Drinking Behaviors	40
CHAPTER 3. METHOD	42
Qualitative Procedure	42

Quantitative Procedure	43
Questionnaire	43
Data Collection and Data Cleaning	44
Characteristics of The Sample	44
Statistical Analysis	45
CHAPTER 4. RESULTS	48
Cultural Orientation Scale	48
Model Specification of The Cultural Orientation	50
Characteristics of Cultural Orientation	55
Cultural Orientation and Drinking Behaviors	57
Drinking Types	58
Cultural Orientation and Drinking Behaviors	58
CHAPTER 5. DISCUSSION	60
Cultural Orientation Scale	60
Cultural Orientation Model	62
Cultural Orientation Characteristics	63
Cultural Orientation and Drinking	65
Limitations and Implications	65
REFERENCES	67
Appendix A. Institutional Review Board Approval	77
Appendix B. Chinese Version Questionnaire	78
Appendix C. English Version Questionnaire	86
Appendix D. Cultural Orientation Factors	93

# Chapter 1

## THEORY

### General Introduction

China has experienced dramatic social, political, economic and cultural changes as the result of modernization. The country has shifted from an old empire into today's modern country and from a self-supplied agricultural society to today's commercial society that trades its good all over the world. Since the late Qing Dynasty, at the end of 19<sup>th</sup> century, China has adopted a great deal of modern science and technology from the west. Western culture has entered China through the founding of western-style schools, the translation of books and journals and Chinese students studying abroad. Up to the end of the Qing Dynasty at the beginning of 20<sup>th</sup> century, the political reform brought larger-scale of social and cultural change in the form of rejecting tradition and turning to westernization (Yang, 1996). These changes have accelerated in the past 30 years largely due to the economic reform resulting from The Opening to the Outside Policy. For most people glimpse of China's past and present highlights China's tremendous economic growth in a relative short time. However, beneath this growth are deep social and cultural changes that are inevitable when multiple cultures come together and blend in different ways. (Yang, 1996). This change can be seen in both superficial and more meaningful ways. Superficially, differences in people's appearance reflected in clothing and hair styles, increases in the number of fast food restaurants all over the country, the introduction of television, the expansion of commercials, changing patterns of entertainment, and even the increasing popularity of the English language. The more

meaningful differences, in contrast, lie within the underlying cultural values that guide individual's thinking and behaviors.

This paper seeks to identify such cultural changes among Chinese people. To do so, concepts and theories in this matter must be presented first.

### **Studies of Cultural Value, Acculturation, and Cultural Orientation**

To understand western influence on Chinese people and how they view tradition and western culture in this process, we need to first understand related theories and concepts.

#### ***Cultural Value Theory***

The term culture refers to the commonalities of language, knowledge, values, beliefs, and practices, shared by a group of people usually living in close geographical locations. These common elements enable them to function as a social group – a society (Brumann, 1999; Atran, Medin & Ross, 2005). Different researchers have approached this issue in different ways. (Atran, Medin & Ross, 2005). Researchers in the area of cultural psychology such as Hofstede, have inspired a kind of “cultural value” approach, based on the assumption that culture includes shared sets of value dimensions. (Hofstede, 1980; Hostede & Bond, 1984; Triandis, 1995; Bond, 1988)

In 1980s Hostede studied the work culture in an international company, whose employees were from over 50 countries. He created a four-value framework to assess cultural differences, named as “Power Distance”, “Uncertainty Avoidance”, “Individualism versus Collectivism” and “Masculinity versus Femininity” (see their

explanations in Chapter 2). The scores for the different countries on these four value dimensions indicated the cultural differences among different countries. (Hofstede & Bond, 1984).

A criticism of Hofstede's methodology is that his four value dimensions were based mainly on western observations and did not cover an adequate range of values in all the cultures he studied. (The Chinese Cultural Connection, an international group of scholars led by Michael H. Bond, 1987; Bond, 1988). Also, cultural value approach was not established to measure individual cultural values. Rather they were based on an "ecological factor analysis" that used the country as the unit of analysis for cultural differences (Hofstede & Bond, 1984; Bond, 1996). If applied at the individual level they failed to fully describe all cultural characteristics. (Hofstede, Bond & Luk, 1993; Hofstede, 1980; Bond, 1996).

Another limitation is that cultural value theory mentioned nothing about cultural interaction. For instance, what happens when a member of one country is exposed to another culture? Since such situation involves two cultures, cultural value theory seems incomplete in such studies. Hence, this leads to another field of cultural studies-----acculturation.

### ***Acculturation***

For cultural value approach, one challenge is that a culture rarely operates in isolation. In cases that members of one culture come into contact or interaction with members and features of other cultures, it requires a theoretical framework that describes the characteristics of both cultures. So, a concept different from cultural value theory is in

need. Thus, another prevailing approach in cross-cultural field has become important in studying cultural interactions—namely, acculturation.

First used by anthropologists, the concept of *acculturation* refers to the phenomenon that occurs when two cultural groups come to have direct continuous contact. Specifically, it triggers cultural pattern changes in either or both cultures (Redfield, Linton & Herskovits, 1936). Later, cross-cultural psychologists adopted this concept to describe individual-level cultural state in certain contexts (Grave, 1967). Because culture endows each society its own way to function, individuals who get in a new culture must reconcile the conflict between two different cultures.

Psychological Acculturation (Grave, 1967) concerns individual functioning in a society under new cultural inputs. Most researchers in this field fixed their eyes on individuals in non-dominant/minority cultural groups, although the original Acculturation concept suggests the involvement of both cultures and its members (Berry, 1997, 2001), because minority cultural groups usually receive much stronger impacts than dominant/mainstream cultural groups. During this contact, these non-dominant group members have to adopt certain strategies to deal with the cultural conflict. Individuals' cultural strategies and their resulting cultural changes, in a nutshell, are rooted in two basic aspects. For non-dominant cultural members, the first aspect is the degree of actual contact with and their participation into the dominant culture. The second aspect is the degree of their cultural maintenance, in other words, the degree they remain the characteristics of the original culture distinct from the new host culture (Berry, Kim, Minde & Mok, 1987; Berry, 2001). In short, to what extent they are willing to interact

with the new culture meanwhile maintain their own, drives individual's choices of strategies and shapes their acculturation states.

From this perspective, several possible acculturating strategies and states arise. The major theoretical framework used in acculturation field is Berry's theory (e.g. see Berry, 1980, 1997; similar theoretical explanation, see e.g. Mendoza & Martinez, 1981):

*Assimilation or Cultural Shift* refers to instances in which individuals give up their original cultural identity and embrace the new cultural identity through daily interaction with the dominant group. People in this category are likely to act no different from the dominant cultural group members by adopting their beliefs and values.

The opposite strategy is *Separation or Cultural Resistance*. It states the situation in which individuals refuse the process of acculturation relative to the dominant culture, thus retain their original identity usually by avoiding interactions. Individuals with Separation strategy are likely to withdraw into their own small society, mostly interact with their own people and show no intention to involve in the larger society where dominant culture has its power.

*Integration or Cultural Incorporation* mostly happens when individuals wish to maintain their own cultural heritage, at the same time seek to interact with the dominant culture. Individuals with this strategy may be those who hold on their original cultural beliefs and values, as well as want to be a part of the larger society.

The last strategy is *Marginalization*, referring to the instances in which individuals do not maintain their original cultural characteristics, but have little interest in interacting with the dominant culture, either. This category sounds more like a forced situation instead of a voluntary strategic choice, because often people in this situation are enforced

to lose their original cultural identity, while find out they are rejected or not accepted by the dominant culture, often due to “exclusion or discrimination” (Berry, 1997).

Berry’s theory laid foundation for empirical studies of acculturation. It works as the underlying theory of Bidimensional model of acculturation. (. It posited that the original and the host cultures are viewed as two separate dimensions that develop simultaneously, thus resulting in four acculturating states corresponding to Berry’s *Assimilation, Separation, Integration and Marginalization*. Intuitively, it is natural to think that the result of a conflict should be: the stronger one side, the weaker the other side. This is the unidimensional model traditionally used by empirical acculturation studies. However, more recent studies have shifted to Berry’s model (e.g., Phinney, J.S., 1990; Lasry & Sayegh, 1992; Xue, 2006; Dere, Ryder & Kirmayer, 2010). In addition, an expanded version of bidimensional model---- *Multidimensional* model (e.g. Cuellar, Arnold, & Maldonado, 1995; Yang, 1996; Toth, J. A., & Van De Vijver, 2003) received some attention in empirical studies. Multidimensional model accepts the bidimensional model and then assumes that bidimensional situation could happen in different domains of one’s life (e.g. Capps, Thinkew, & Horowitz, 2010). For example, individuals could act based on their home culture in their family life, while adopt host culture principles in other social life outside family. Empirically, both Bidimensional Model and Multidimensional model were better supported by recent studies (e.g. Chung, Kim, & Abreu, 2004; Kim, Artkinson & Umemoto, 2001), while.

Another empirical question of acculturation is: what aspects or constructs should be use to measure individual acculturation states? At the individual level, the changes could influence various aspects of life, from beliefs and values, to behaviors and thoughts

(Ward, 1996). However, some cross-cultural researchers (Phinney, 1996; Kim, Atkinson & Umemoto, 2001; Betancourt & Lopez, 1993) have pointed out that a great deal of acculturation measurement only used behavioral indicators such as language use, food consumption, television preference, participation in the dominant culture and so forth (Berry, 2001; Cuellar, Arnold, & Maldonado, 1995; Liem, Lim & Liem, 2000; Phinney, 1996; Kim & Omizo, 2010; Kumar & Nevid, 2010). The problem is that there is no reason to assume that acculturation only causes behavior shift. Instead, it should have two distinct dimensions of resultant changes, values and behaviors (Szapocznik, Scopetta, Kurtines, & Aranalde, 1978). On the other hand, it has been showed that behaviors as the sole indicator was inaccurate (Phinney, 1996). Thus, multiple indicators of culture have both theoretical and empirical legitimacy (Chen & Danish, 2010; Kim, Atkinson, & Young, 1999).

### ***Cultural Orientation***

Despite the large volume of acculturation studies, few studies ever paid attention to acculturation process outside of western world. Such acculturation could be caused by colonial history (Cheung-Blunden & Juang, 2010; Eide, Acuda & Roysamb, 1998), globalization (Chen, Martinez, & Bond, 2008) or sociocultural development during modernization (Yang, 1996). In Western acculturation studies, researchers sometimes used the term *Cultural Orientation* to describe the results of acculturation, or equaled it with acculturation. In the present study, *Cultural Orientation* is defined as the process individuals experience when they face the influence of other cultures *while still living within their geographic origins* (Xue, 2006).

The difference between immigrant acculturation and cultural orientation is subtle, but important. The change in cultural orientation may be more gradual and unnoticeable in the sense that individuals have choices in this process and voluntarily accept or reject some aspects of one culture over another without external forces and acculturating stress. They may not simply embrace the entire alien culture, but “rather the selective incorporation of cultural elements from the various cultural worldviews and practices to which a person has been exposed during his or her life.” (Chen, Martinez, & Bond, 2008, p. 806). While in acculturation, the host culture as the dominant power, overwhelms individuals who hold different cultural backgrounds, in which the change may be more sudden, obvious and involve the whole elements and practices of the dominant cultures in order for individuals to function in the new society.

The major differences between cultural value theories, acculturation and cultural orientation are presented below:

Table 1. The characteristics of three different cross-cultural frameworks

<b>Theory</b>	<b>Subject</b>	<b>Characteristics</b>
Cultural Value	The country/society	<ol style="list-style-type: none"> <li>1. Focus on static cultural value</li> <li>2. Involves only one culture/country</li> </ol>
Acculturation	Individuals in culturally minority group, usually in western context	<ol style="list-style-type: none"> <li>1. Focus on cultural interactions and its influences on cultural changes among individuals indicated by both values and behaviors</li> <li>2. Involves at least two cultures</li> <li>3. Changes are comparatively sudden and obvious under the pressure of function and adaptation, thus usually adopt the whole elements of the dominant cultures</li> </ol>

Cultural Orientation	Individuals in culturally dominant group, usually in non-western context	<ol style="list-style-type: none"> <li>1. Focus on cultural interactions and its influences on cultural changes among individuals indicated by both values and behaviors</li> <li>2. Involves at least two cultures</li> <li>3. Changes are comparatively slow, and voluntary, thus usually adopt the selective elements of another culture.</li> </ol>
----------------------	--	---

Even with the differences, Berry's theory of acculturation can still be applied to cultural orientation. A relatively small amount of research has supported the use of acculturation theories in globalization-based or colonial acculturation (Chen, Martinez, & Bond, 2008; Cheung-Blunden & Juang, 2010; Xue, 2006). On the other hand, concepts from Cultural value approach were still valid in cultural orientation (Xue, 2004, 2006).

### **Cultural Orientation and Drinking**

The relationship of acculturation and cultural orientation with other factors has been well explored, including psychological functioning (Kim & Omizo, 2010; Lo, 2010), mental health (Cheung, Cheung, & Leung, 2008; Kumar & Nevid, 2010; Wang & Mallinckrodt, 2006), social/interpersonal relationships (Capps, Tinkewb & Horowitz, 2010), health behaviors (Eide, Acuda & Roysamb, 1998; Corral & Landrine, 2008) and education (Suinn, 2010; Cheung-Blunden & Juang, 2008). Especially, different cultural orientations have been found to associate with different drinking behaviors directly and indirectly (Eide, Acuda & Roysamb, 1998; Xue, 2004, 2006; Shell, Newman & Fang, 2010).

### **The Present Study**

#### ***Purpose of study***

There are two overall objectives for my study. The first objective is to design an instrument to measure cultural orientation among Chinese university students. This part will be based on Xue's Chinese Adolescence Cultural Orientation Scale (2004, 2006). The second objective is to investigate the relationship between cultural orientation and drinking behaviors. To achieve these two objectives, four research questions were generated to guide my study:

### ***Research Questions***

1. What is the structure of the new instrument?
2. What model is suitable to interpret the cultural orientation among Chinese university students?
3. What are the characteristics of cultural orientation among Chinese university students?
4. What is the relationship between cultural orientation and drinking behaviors?

This study is important for several reasons:

Theoretically, as described in Table 1, it may be necessary to separate cultural orientation as a concept from general acculturation because its different subject, context and changing process. Thus, from an empirical perspective, it is also important to have an independent cultural orientation measurement.

It is hypothesized that the college student cultural orientation scale may be different from the original adolescence cultural orientation scale, because compared to high students college students have more opportunities to make contact with outside world. They have more time to step out classroom and textbook to explore and make

sense of both Chinese society and parts of Western society they have access to. Thus, they might have deeper and more comprehensive understanding about Chinese tradition and Western influences. In addition, with the rapid economic development, Chinese society may have experienced some new changes during the past several years since Xue's study. Therefore, to test this concept and its measurement in a different population can further validate it and provide more insights for the studies of cultural orientation and its associations with other areas (e.g. drinking behaviors).

In the following chapters, I will first present a detailed literature review related to cultural orientation. In chapter three I described the methodology of the present study, followed by results and discussion.

## Chapter 2

### LITERATURE REVIEW

Acculturation refers to the process that individuals experience when they come to a new culture with the conflict between their original cultural backgrounds and the new one, causing the change in their cognition, psychology and behaviors representing their cultural values and practices (e.g. Cuellar, Arnold & Maldonado, 1995; Chung, Kim, & Abreu, 2004; Phinney, 1990; Chia & Costigan, 2006); whereas, cultural orientation specifies the process of cultural change as individuals reshape their cultural patterns under outside cultural influences when they still stay in their original cultural environments (Chen, Martinez, & Bond, 2008; Xue, 2006).

Although there are disparities between acculturation and cultural orientation as noted in Chapter 1, generally, cultural orientation and acculturation still share some common characteristics in their development patterns, thus the way to investigate it is by empirical studies.

There are two key aspects in acculturation studies: how acculturation is presented and what domains individual acculturation operates on.

#### **Unidimensional vs. Bidimensional Models of Acculturation**

The first aspect relates to the interpretation of acculturation----- the question of what model acculturation studies should use. The perspective of unidimensional model views the two cultures in process as two extremes of a bipolar continuum and individual acculturating toward one extreme will end up with the rejection of the other. Recently, the trend of unidimensional models has given way to a more comprehensive

*bidimensional* model. The basis of this model is that individual acculturation along the two involving cultures develop independently (Berry, 1997). According to Berry's theory of bidimensional acculturation, several major orientations can result in this process: Heritage orientation results from *separation*, in which individuals strive to maintain the key elements of the original culture and reject the dominant culture; Bicultural orientation, caused by *integration*, in which individuals manage to absorb the key components of both cultures; Mainstream orientation, from the *assimilation* of the dominant culture and abandonment of the original culture; and Marginal orientation, following the *rejection* of both original and dominant culture. The comparisons between these two theories with empirical data mostly support a bidimensional model.

Rider, Alden and Paulhus (2000) compared unidimensional and bidimensional models about the effectiveness of their prediction on personality, self-identity and adjustment. Three studies with three different samples were conducted. In the first study, they drew conclusions from about 160 university Chinese students in United States, indicating that the bidimensional model revealed the broader vision of acculturation. Also, the independence of acculturating through two cultures was also validated based on distinctive prediction patterns on three external constructs. The second study was conducted with improved scales, showing the consistent results with the first study. Meanwhile, the relationship of two cultures was identified as orthogonal. The third study was generalized to a larger sample including different Asian groups. The results were similar with the previous two studies. The difference was that the two cultures demonstrated certain interrelationship, however was still much closer to bidimensional model framework. Despite the authors admitted the parsimony of the unidimensional

model, they recommended bidimensional model for better understanding of acculturation and its implications to other aspects of individual life.

Instead of comparing different models, Schwartz and Zamboanga (2008) directly tested Berry's classical acculturation theory without presuming a theoretical framework. That is to say, during the data analysis, they did not arbitrarily classify the participants into different categories of acculturation based on their test scores, but having the data formed their own patterns and validated them by correlating with external factors typically used in acculturation studies, such as family relationship, and psychological adjustment. Based on the data from 436 Hispanic college students, six rather than four categories emerged, among which three were in accordance with Berry's theory--- assimilation, separation and integration, while marginalization was not identified as a distinct valid class. In addition, both separation and assimilation were correlated to some extent with biculturalism/integration, indicating a dependent relationship between Berry's four categories. Correlations with external factors also verified the existence of these six categories. Also, behavior and value acculturation showed variance across both Hispanic and American cultures. Thus, the authors proposed that the acculturation process was more complex than predicted by theory. What they did not mention is that variance between value and behaviors as well as different categories might indicate the possibility of a multidimensional acculturation process.

### **Multidimensional Models of Acculturation**

Recently, researchers have begun to notice the variance among different domains in acculturation. So, unidimensional and bidimensional models can be further expanded

to a multidimensional model with the assumption that acculturation may differ among different domains. And, the multidimensional model has two different types: unilinear and bilinear multidimensional model. The unilinear multidimensional model applies the unidimensional model to different domains. The bilinear multidimensional model applies the bidimensional model to different domains.

In a study with 355 Asian American undergraduate students, Abe-Kim, Okazaki and Goto (2001) compared unidimensional model, unilinear and bilinear multidimensional model on their relationships with four other cultural indicators (individualism-collectivism, loss of face, dependence-interdependence, impression management). The results showed unidimensional model explained more relationship with these cultural indicators. However, within the bilinear multidimensional model, individuals with assimilated orientation differed from those with traditional orientation on those four cultural indicators, thus suggesting the necessity of adopting bilinear multidimensional model. The authors did not reach a definitive conclusion, but showed favor to multidimensional model due to its more comprehensive nature of capturing different acculturation states.

Flannery, Reise and Yu (2001) conducted an empirical study to compare the predictive power of unilinear multidimensional and bilinear multidimensional model with respect to the relationship between acculturation state and other psychological, social and educational factors. They borrowed Suinn-Lew Asian Self-Identity Acculturation Scale (SLS-U) to test unilinear multidimensional model, while Asian American Acculturation Inventory (AAI) for bilinear multidimensional model. Other than that, they had seven external measures as predictive criteria. The results showed that in the bilinear

multidimensional model, the hypothesized orthogonal relationship between Asian and Western culture was not supported as indicated in the literature. As matter of fact, these two had a moderately strong negative correlation. Flannery et. al.'s interpretation for this was to suggest the possibility of ethnogenesis---- the emerge of a new ethnicity which combines the characteristics of both cultures. For the predictive power of these two models, bilinear multidimensional model predicted more external factors compared to unilinear multidimensional model. However, the authors stated that this advantage simply resulted from that the bilinear multidimensional model has two predictors compared to only one predictor in unilinear model. They concluded that unilinear multidimensional model was recommended for the economic consideration due to its parsimony.

Practically, it took less time to finish and was easier to interpret. On the other hand, the bilinear multidimensional model was better for theoretical exploration of acculturation due to its better predictive power and coverage of acculturation states. Thus, they proposed that which model should be used in an acculturation study depends on the targeted group and the factors that researchers want to predict with acculturation. An essential problem of this study was that they used different scales to compare different models, thus having different statistical problems (e.g. measurement error and reliability). In this sense, the study may actually compare different instruments instead of different models of the same construct.

Miller (2007) believed a *bilinear* multidimensional model was better to capture the nature of acculturation compared to unidimensional model and even bidimensional model. Meanwhile, he suggested that the domains that acculturation process operates upon should be both value and behavior. Each of these two domains can then be divided

into such specific components as beliefs and/or knowledge (value domain) and language use, ethnic affiliation and participation in tradition activities (behavior domain). Miller (2007) revised existing scales from acculturation literature to fit his theory of bilinear multidimensional model. He analyzed data from 288 Asian Americans and found out his hypothesis was verified that value and behavior indicators were valid as two distinct acculturation domains. And, the bilinear multidimensional model fitted better than both unidimensional and bidimensional models. His study showed value and behavior acculturation varied in this process. To be specific, values and behavioral orientations within Asian culture were unrelated, whereas there were moderately related within Western culture. In addition, the behavioral acculturation process across two cultures was negatively related, which means adherence to Asian behaviors would result in diminishing Western behaviors. So, the relationship between two culture in acculturation was oblique instead of orthogonal.

Miller (2010) replicated his 2007 study via cross-validation with 306 participants. The result turned out to be consistent with the previous one that bilinear multidimensional model demonstrated the best model fit. He also hypothesized that the generation status would work as the moderator that unidimensional model would be most for the 1<sup>st</sup> generation while multidimensional model for 2<sup>nd</sup> generation. He evaluated 494 participants with some of them from the 2007 study. The result did not support the hypothesis and multidimensional model still had the best model fit for the 1<sup>st</sup> generation.

The second aspect relates to the content of acculturation----- the question of what domains or contents need to be assessed in the model. It seems particularly important for multidimensional model is because the multidimensional model assumes the different

acculturating processes among different domains. Most literature believed value and behaviors should be the two major domains as mentioned in the first chapter.

Acculturation or cultural orientation of a certain group is a specific situation in terms of the two interactive cultures, depending on the way the group involves in both cultures under specific social environment. For instance, American Chinese may have different acculturation patterns from those in Europe. So, to only look at the value aspect is not enough to portrait the acculturation process of a group. In addition, acculturation or cultural orientation has been proved to be a multidimensional, developmental process in which different aspects do not develop at the same pace (e.g. Cuellar, Arnold & Maldonado, 1995; Chen & Danish, 2010).

Eide & Acuda's (1996) instrument about cultural orientation of Zimbabwe adolescents only assessed behavioral aspect, such as Watching Television and Movies, listening to Video and Western-style Music, Reading English Newspaper, Magazines and Novels. In this study, they only paid attention to behavioral aspect probably because their purpose of study was to detect relationship between cultural orientation and their choice of alcohol-type (domestic or imported). So, the adoption of westernized behavior was highly related to their alcohol choice, thus a better predictor of their study of drinking behavior.

However, exclusive or primary focus on behavioral aspects places problems on the measurement of cultural orientation. Phinney (1990) noted that behaviors as cultural indicators do not directly connect cultural influences and actual acculturation results. Empirical studies found out that cultural change in behaviors happened faster than the change in cultural values (Betancourt & Lopez, 1993; Kim, Atkinson & Yang, 1999;

Szapocznik & Kurtines, 1980). Besides, behavioral approach is believed to be unstable in that acculturation in behavioral domain was a function of age and sex (Szapocznik & Kurtines, 1980).

Therefore, most current acculturation studies included both values and behaviors measure, unless they focused on one side of acculturation on purpose (Kim & Omizo, 2010). Chia and Costigan (2006) investigated Chinese Canadians acculturation using a bilinear multidimensional model. As the acculturation literature indicated, Chia and Costigan adopted values and behaviors as the two primary domains of their model, which they named internal and external domain, respectively. The subcomponents of these two domains included language use, knowledge of culture, cultural identity, media preference, etc. One new construct that had received little attention was participants' perception of how their own group was reviewed by the mainstream group or the larger society. With respect to the relationship between two cultures, the authors anticipated they were independent or positively related. 234 students with Chinese origins were investigated, supporting their hypothesis that these two cultures in general were independent. On the other hand, the structure of domains revealed different information. Value and behavior domains stood valid within Chinese culture, at the same time, correlated positively. On the contrary, these two domains collapsed into one general domain within Canadian culture, suggesting that participants viewed acculturation of different domains toward Canadian culture in a similar manner. Also, the importance of values differed across two cultures in terms of identity with the culture those values represent. To be specific, Chinese values were central to being Chinese while Canadian values were not so important. Moreover, values and behaviors domains related differently

across two cultures in the way that two cultural values showed the sign of coexistence with each other while Chinese behaviors was negatively related to Canadian culture, indicating the sign of rejection on each other. In short, this study supported the multidimensional model but to some extent contrasted with previous literature on the issue of domains.

In Chen and Danish's study (2010) about emotional disclosure predicted by acculturation among Asian Americans, both value and behavior-based measurement were used. Ninety-eight Asian American University students participated in this study. Asian Value Scale-Revised (AVS-R) measured values-based acculturation, and Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA) measured behaviors-based acculturation, which was on singular continuum representing a unidimensional model. Results indicated that value-based acculturation predicted individual emotional disclosure. Speaking further, more traditionally acculturated individuals displayed less stress disclosure, while behaviors-based acculturation did not show predictive power on this issue. The more important point revealed by this study is that value showed more stability over time during acculturation than behaviors. So, the authors believed values were more accurate measure of acculturation. But, the researchers also postulated that it was the unidimensional structure of the behavior acculturation scale limited its predictive power, suggesting a bidimensional structure for the measurement of behaviors-based acculturation. Nevertheless, with respect to emotional self-disclosure, behaviors were the significant predictors while values did not show any predictive significance. The different predictive power of value-based and behavior-based acculturation also well indicated these two domains measured distinctive aspects of acculturation. Values and behaviors in

this study were unrelated to each other, contradicting with results from some literature that value and behavior were related (e.g. Chia & Costigan, 2006).

However, not all multidimensional models in the literature explicitly used values and behaviors to represent domains of acculturation process. Dere, Ryder and Kirmayer (2010) investigated acculturation among immigrants in Canada. Three ethnic groups were used in this study, including Anglophone Caribbean, Vietnamese and Filipino. Berry's acculturation theory was assumed to operate in three domains: loyalty, behavior and situated identity. Meanwhile, researchers hypothesized these three domains were positively related to each other within each cultures. In addition, as mentioned in other studies, an important underlying assumption of Berry's theory was that the two cultures involved in acculturation should be independent or slightly positively related in terms of acculturation (Chia & Costigan, 2006). The authors set up a cut point  $-.50$  to determine whether the data supported Berry's theory. A magnitude of negative correlation beyond that would support unidimension. Three sample groups were tested separately. First, these domains were proved to be valid. They remained as separate constructs with moderate positive intercorrelation within each acculturating state. As for the independence of two cultures across all three domains, it only received full support among Anglophone Caribbean group, while for Vietnamese and Filipino, the independence did not show in loyalty domain. In other words, in behaviors and identity domains, acculturating processes of two cultures were independent, which contradicted Chia and Costigan (2006)'s finding that behaviors of two cultures could not coexist.

A noteworthy point is that these studies did not reach a decisive agreement on the dimension of model as well as the domains, in light of empirical data. Current researchers

still tended to suggest the advantage of bidimensional and multidimensional models in examining acculturation, especially the full theoretical possibility of acculturation, although the unidimensional model was still sometimes recommended or used under the consideration of easy interpretation and parsimony (Ryder, Alden & Paulhus, 2000; Kim & Omizo, 2010). Several reasons could result in this mixed evidence. First, the discrepancy could generate from the measurement problems such as these studies used different scales for different models when they did comparisons. Second, different ethnic groups used within one study could also cause the differences in evidence. Different groups may have different perceptions of their acculturation process due to the acculturation conditions provided by the larger society or their positions in the larger society (Berry, 1987; Dere, Ryder & Kirmayer, 2010). The second premise regarding the majority group's attitude toward minority group's acculturation process was investigated by a European study.

A large proportion of acculturation studies have been done in United States or Canada. Acculturation in other places like Europe, has not received substantial attention. Adrens-Toth and van de Vijver (2003) conducted an acculturation study involved both Turkish immigrants and the Dutch majority group in the Netherlands. The main purpose of their study was to investigate the multiculturalism in the Netherlands and the perception of these two different groups on acculturation. The authors hypothesized that the attitudes toward acculturation among the majority and minority groups would be different, so would be their preferences with respect to Berry's four acculturation strategies. Over 1600 subjects participated in this study. For the Turkish-Dutch sample, two domains covered their acculturation across two cultures: public domains, referring to

social contact with the larger society, and private domains, referring to child rearing and cultural habits. The results verified their hypothesis in that Dutch had a general neutral view on multiculturalism while Turkish-Dutch apparently more favored it. In detail, Dutch as the majority group preferred assimilation, while Turkish minority's choice was more complicated. They preferred integration in public domains and separation in private domains. This indicated the desire of minority group to become a part of the larger society and still wished to maintain their own cultures. So the adaption to the majority culture played significant role in their public life when made contact with the larger society. As result, the bidimensional acculturation model only showed in public domains among minorities. While for the majority groups, it appeared that the unidimensional model was presented because they believed the favor of one culture would end in the expense of the other.

### **Cultural Orientation Studies**

In summary, the theories of acculturation in most of the references aforementioned were examined among immigrants or ethnic minority groups in western contexts. While cultural orientation targets the change of cultural patterns among culturally dominant group when staying in their home culture. Even though cultural orientation in this occasion might be treated as the special situation of acculturation, the applicability of the acculturation theory still needs examination.

Eide, Acuda and Roysamb (1998) studied cultural orientation and the type of alcohol people consumed in Zimbabwe. The dynamic of cultural orientation in Zimbabwe was viewed as the interaction of the local cultural flow and the global cultural flow. The

latter in such a developing country was mostly Western. Cultural orientation was merely measured by a set of behaviors, ranging from preference to radio, music, newspapers, novels to magazines, videos and movies. In this sense, cultural orientation was considered as moving along a bipolar continuum, that is to say, as a unidimensional model.

Chen, Benet-Martinez and Bond (2008) conducted a study focusing on bilingualism, bicultural identity and its relationship with people's psychological adjustment in Hong Kong. In terms of the formation of bilingualism and bicultural identity, they examined three acculturating situations: immigrants, sojourners, and globalization-based acculturation. The underlying assumption was based on Berry's theory that the individual's acculturating process along two cultures in contact develops independently, thus allowing the existence of biculturalism. For the globalization-based acculturating individuals, they sampled 452 Chinese college students from both Hong Kong and Mainland China. The results indicated that the sample was highly bicultural in that they identified with both Chinese and Western cultures, although identification toward the Chinese culture was higher. Biculturalism was also linked to better psychological adjustment. The interest of the authors was not in the full model of acculturation, so their instruments were designed to tap on only biculturalism. However, this study raised a very important concept: globalization-based acculturation, or the concept Cultural Orientation.

Cheung-Blunden and Juang (2010) tested the generalizability of acculturation theory in Hong Kong, a colonial setting where the western culture as a minority culture comes into interaction with the indigenous culture instead of the other way around.

Because the bicultural context exists in many official setting of Hong Kong where both British and Chinese elements are allowed or even required to coexist (i.e. bilingualism in government and school requires to learn both English and Chinese), they hypothesized that bidimensional model would best depict the situation. One hundred thirty eight Chinese middle school girls and their parents were included in this study. The results showed that Berry's acculturation theory can be applied to colonial acculturating setting and the bidimensional model was suitable for such context compared to the unidimensional model. The immigrant acculturation phenomenon assumed assimilating into the western (dominant) culture could result in positive psychological and social outcomes. Opposite to it, this study demonstrated that, adherence to *indigenous (Chinese)* culture was found to associate with *less* psychological maladaptive symptom, such as depression and more positive family relationship and academic performance. While bicultural orientated individuals did not show adaptive advantage over traditional orientated ones as immigrants acculturation literature suggested. This makes sense in that Chinese culture is the dominant culture that the majority people and the society function in.

### **Cultural Value Studies**

Some researchers think value has advantages for study of a culture. The first advantage is the value priorities represent the key elements central in a culture. The second point is they are directly influenced by environment, thus suitable for studies examining individuals and cultural changes in the context of social changes. Besides, values are more likely to have cross-cultural generalization, independent of specific situations (Bond, 1996; Smith & Schwartz, 1997). In acculturation and cultural

orientation studies, value has been cited by a great deal of literature as a central domain of acculturating or cultural orientation process. Therefore, cultural value studies can provide information for the construct of value domains.

### ***Hofstede's Theory and Related Studies***

Hofstede (1980) 's study on IBM employees from over 50 countries and regions stands seminal in the field of cultural values. Hofstede analyzed a personnel survey conducted by IBM consisting of 32 items assessing employees' perceptions, personal goals, behavior intentions and beliefs in their workplace. The ecological factor analysis was adopted for the data analysis, by which the factor scores were constructed for country instead of individuals. Four dimensions of work-related values were generated and then later validated and retested by other researchers (e.g. Hofstede & Bond, 1984).

Power Distance was defined as "the extent to which the less powerful members of institutions and organizations accept that power is distributed unequally". It concerns the issue of social inequality and the distribution of authority among social members. In Hofstede's sample, an example would be the relationship between employees and their superiors.

Individualism/ Collectivism is a bipolar construct. At the end of individualism, people are expected to care only for themselves and their immediate families, while at collectivism end, people concern a wider in-group including extended family and clan to exchange for unquestionable loyalty. For example, a collectivist may first think about the interest of the group to which he/she belongs to when he/she makes decision.

Masculinity/Femininity is defined as a label, in which a society with Masculinity feature favors masculinity, achievement, heroism, assertiveness and material success while a society with femininity feature values relationships, modesty, caring for the weak and interpersonal harmony. One aspect of this is how the society views gender roles and its effects on people's self-concept.

Uncertainty Avoidance refers to "the extent to which people feel threatened by ambiguous situations, and have created beliefs and institutions that try to avoid these". To be specific, this construct refers to the way people deal with conflicts and aggression.

According to Hofstede's theory, these four factors cover the basic content of all cultures, and cultural difference lies on the distinctions on these four factors. However, Hofstede's studies were not originally designed to measure cultural differences, but work-related values. Whether what people value in the workplace can be generalized to represent values of the whole country is a question. Also, his participants were questionable in that they all came from the different branches of the same company, which could lead to the validity question whether they are representative sample of the country they are from. Another problem put on Hofstede's study is that although item-level scores were still based on individual response, they were averaged out to form country factor scores. From that, these four constructs emerged as the factors describing common social issues for any society. So, when they are applied as individual-level cultural values, it can cause confusion (Bone, 1996; Rousseau, 1985), called ecological fallacy (Hofstede, Bond & Luk, 1993; Robinson, 1950). This ecological fallacy has been warned by Hofstede himself (Hofstede, 1980).

Hofstede, Bond and Luk (1993) reanalyzed the same data from a survey study of organizational cultures in 20 organizational units at individual level by controlling the variances between units. The results showed the patterns of correlations and variances were totally different from that in organizational level. Six factors were retained for both value and behaviors domains. At individual level, factors analysis revealed much smaller factor loadings as well as explained much smaller variances. On the other hand, value aspect accounted for more variances at individual-level analysis, while at organizational level, the relationship was reversed, in which behavioral aspect accounted for a bigger proportion. Moreover, at organizational level, value and behaviors were two clearly distinct constructs, whereas at individual level, these two were not so distinct that they apparently affected each other. So, cultural values from country- or group-level cannot directly apply to measuring individual-level cultural values. Another theoretical problem from Hofstede's study is whether all cultural differences can be reflected only by certain common constructs across all cultures that address basic social issues. Reducing cultural issues to social issues may lose some unique structures of cultures, especially examining a specific culture.

Bond et al. (*The Chinese Culture Connection*, 1987) raised such question that whether a theoretical framework, such as Hofstede's, can be applied in cross-cultural studies. Whether an instrument created for a specific culture would yield different results from those of Hofstede's culture-universal instrument? First, Bond et al. developed a value measure that aimed at reflecting Chinese culture. Their approach to this was to ask a number of Chinese social scientists to prepare a list of at least 10 core values of Chinese people. 100 universities students were involved in this study and the scale consisted of 40

items with each representing one value in Chinese culture. The same methodology as Hofstede's ecological factor analysis was used and it revealed four factors: Integration, Confucius Work Dynamism, Human-heartedness and Moral Discipline. Then they were mapped onto Hofstede's four factors to seek any correlations. It turned out that Human-Heartedness was overlapped with Masculinity, while Integration with Power distance and Moral Discipline with Individualism negatively. The only exception is Confucius Work Dynamism, which did not show any relation with Hofstede's factors. Furthermore, the researchers did a second-order factor analysis, indicating the three overlapping factors actually collapsed into one underlying construct named Collectivism, which suggested an overall general value that group integrity was picked against self-interest. Whereas, Confucius Work Dynamism still stood as a separate construct that was mostly Confucian given its content such as hard working, loyalty, commitment and education. So, the final scale only constituted two overall factors: Collectivism and Confucius Work Dynamism.

This study reveals that instruments created in Western context (i.e Hofstede's) can cause problem when applied to a specific culture outside West, and instruments generated from indigenous context may better capture what they mean to measure. In addition, the factor of Collectivism and its content were externally validated by another important theoretical framework in this field.

### ***Triandis' Individualism-Collectivism model***

Triandis' (1995) Individualism-Collectivism model also has seminal impact on cross-culture studies. In various cultural studies, Individualism by definition manifests the tendency of inner-directedness and resentment of conformity. For individualism-

oriented people, their interest of action is personal or they only concern a small in-group consisting of very close families. They require more autonomy in interaction with environment, in which individuals tend to meet their needs and desires by self-reliance and exploration by controlling environment (Yang, 1995). Collectivists act on common interest by identifying themselves with the group and their own interest with group's, which means they see the interest of their groups is identical to personal interest (Hui & Triandis, 1986). A collectivistic society is more homonomous and people in it try to fit into environment and hide the individuality for a unified society (Yang, 1995).

Instead of a single-aspect factor, Triandis view the Individualism-Collectivism construct as a set of beliefs and behaviors, a cluster of variables reflecting some basic aspects of social interactions. Hui & Triandis (1986) summarized them into seven categories:

*Consideration of implications of one's own decisions and/or actions for other people.* The distinction of Individualism and Collectivism in this aspect is on whether people's concern and decisions are primarily based on personal gain (e.g. close family) or a larger social group (e.g. extended family, friends or certain groups they belong to).

*Sharing of material resources.* The different of individualists and collectivists is that individualists value self-reliance and independence while collectivists endeavor to maintain a network of social relationships by sharing materials. For collectivists, they value reciprocity, as it is crucial in building social relationship.

*Sharing of nonmaterial resources.* For collectivists, the reasoning manner in sharing of material resources (i.e. reciprocity) is extended to nonmaterial resources. By that, it means they may materialize some emotional or spiritual resources, such as love,

affection, happiness by expecting return of tangible resources. This is also the way they build social relationships. On the other hand, individualists believe people should take care of themselves.

*Susceptibility to social influence.* In this aspect, collectivists are more likely to submit to groups than individualists. They are more emotionally attached to their groups and will not drop their membership unless the situation really goes extreme. For example, they are usually reluctant to confront with friends and break the relationship. So, harmony is highly valued by them, so is conformity. Whereas, when individualists face the same situation, they may generally follow the group but they will stop when the cost is too high and simply switch the group.

*Self-presentation and face- work.* For collectivists, getting group's approval (e.g. family, friends) is a major focus of their life and they feel shameful when fail to do so. This related to an important concept often seen in a collectivistic society--- face loss. While for individualists, they believe their behaviors only answer to themselves, government, or God.

*Sharing of outcomes.* Collectivists' belief about the relationship with other people is that they are interdependent in the way that their actions bear impact on others. Moreover, they actually experience emotional disturbance in the form of shame and disgrace when they believe they may have done something that could harm others or they fail to achieve. While individualists tend to think "it's their own business".

*Feeling of involvement in others' lives.* Other than believing in the impact others' behaviors bring upon them, collectivists also have the feeling that they should involve in other people's lives. The typical example is that parents decide their children's choices of

school, major, career, marriage and other aspects of life. While, individualists respect the autonomy and privacy of their own and other's life.

Triandis believed this Individualism-Collectivism construct was a basic cultural factor that societies differ in the extent of individualism/collectivism. To make sure that their conceptualization was the same or similar to all cultures and its possibility of cross-cultural generalization, the authors invited 81 psychologists and anthropologists from all over the world with different cultural backgrounds to their study. With 49 responses, the results supported the cross-cultural relevance of this conceptualization, even though the importance of these aspects was different.

Although the framework of cultural value studies is not suitable for cultural orientation studies, some concepts of their ideas are still useful. For instance, in Xue (2006)'s study, she borrowed the concept of Triandis's individualism-collectivism as one of factors in her cultural orientation questionnaire. In the Asian American Value Scale (Kim, Atkinson & Umemoto (2001), factors such as Collectivism, Conformity to Family and Social Norms and Expectations were inspired by Triandis' framework.

### ***Other Chinese Culture Studies***

Studies by Hostede, Bond or Triandis focused on country-level analysis of cultural values, not individual level. Problems such as ecological fallacy can arise when applying them directly to individual-level cultural values. In this sense, to measure individual cultural characteristics, researchers need to analyze cultural values at individual-level.

Hui and Triandis (1986) noted that their Individualism-Collectivism construct could be also treated as a personality variable because at the very basic level, "it is the person's

own feelings, emotions, beliefs, ideology, and actions that constitute collectivism” (pp.229). In other words, collectivists constitute a collectivistic society, so does for an individualistic society.

In Cheung et. al’s study (1996), the authors designed their Chinese personality inventory with sets of factors that reflected Chinese culture. They believed that an assessment instrument that aims to measure a particular culture should include the cultural-specific features as well as the cultural- universal constructs, which they called emic (culture-specific)-etic (culture-universal) approach. They used diverse ways to identify those cultural-specific factors, such as Chinese literature, proverbs, and street surveys. Also, 433 Chinese people from both Hong Kong and mainland China were invited to write down at least 10 adjectives that can describe the personality of their surrounding people, along with the behavioral display of these adjectives. In addition, the authors also reviewed psychological literature to find out personality constructs specific to Chinese people, such as face, ren-qin (orientation towards relationship). Then, compared with Western-origin personality inventories, they identified the following unique constructs specific to Chinese culture that also showed in other cultural researches:

Harmony. Remaining inner peace of mind, as well as interpersonal harmony is considered as virtue of Chinese society. This reflects on Chinese people’s behaviors in the form of the avoidance of conflict and maintenance of equilibrium.

Ren-qin (Relationship orientation). This is presented by the prevalence of social favors in Chinese society, following various exchange standards based on the basic principle of hierarchy order. In this subscale, they measured the individual’s adherence to

these standards of social exchange, including courteous rituals, exchange of resources, reciprocity, maintaining and utilizing useful ties, and nepotism.

**Thrift.** Thrift is believed to a very important virtue according to Chinese culture. People should save money for future and be careful about their way to spend money. This is opposite to Western Consumerism, which authors believed would have more impact on traditional beliefs as China's economic development and increase in materialism. So the lack of this aspect in the instrument was thought as a gap in the coverage of Chinese culture-specific features. Items in a bipolar Thrift-Extravagance subscale measures participants' tendency to save rather than to waste, carefulness in spending, and the willingness to spend money for pleasure and entertainment.

**Modernization.** This concept was borrowed from Yang's Chinese Individual Traditionality-Modernity Scale (CITMS) and believed to reflect the social modernization through individual change. The modernization subscale in this study covers attitudes toward traditional Chinese beliefs and values in the areas of family relationship, materialism, hierarchical order, rituals and chastity.

**Defensiveness.** This mechanism includes self-protective rationalizations, externalization of blame, self-enhancement, and belittling others' achievements, which is seen by some researchers and some Chinese literature as the shortcoming of traditional Chinese people.

**Graciousness.** This virtue values patience, forgiveness, acceptance of self and others and self-sacrifice.

**Veraciousness-slickness.** Veraciousness is a standard for Chinese people to make judgment of one's trustworthiness, while an overly veracious person may be seen as lack

of flexibility and adaptability, which means a subtle balance between these two characteristics will be most appreciated.

Face. In Chinese culture, the concept of face is connected to interpersonal relationships, which concerns about the tendency that people's behaviors enhance or fit one's social status in the process of social interactions. The subscale measures the concern for maintaining face and social behaviors that enhance one's own face and that avoid losing one's face.

Family orientation. There is a strong sense of family solidarity in traditional Chinese culture and family orientation is the core of interpersonal relationships in Chinese culture.

The preliminary instrument consisted of original items in the first person format based on these factors, and translated items from other Western-origin scales.

It can be seen that factors in this inventory have some similarities with concepts described by studies mentioned above (e.g. Triandis's). And, one of factor in their inventory was originally from Yang's study. Within 20 years, Yang and his colleagues developed and improved the Multidimensional Scale of Chinese Individual Traditionality (MS-CIT) and Multidimensional Scale of Chinese Individual Modernity (MS-CIM) (Yang, 1996). It meant to examine Chinese people's changes of traditional values resulting from modernization of Chinese society. They finally arrived at ten factors, with five factors in each of these two dimensions.

Five factors in Traditionality scale:

- Submission to Authority
- Filial Piety and Ancestral Worship

- Conservatism and Endurance
- Fatalism and Defensiveness
- Male Dominance

Five factors in Modernity scale:

- Egalitarianism and Open-mindedness
- Social Isolation and Self Reliance
- Optimism and Assertiveness
- Affective Hedonism
- Sex Equality

Overall, traditionalism in his scale is believed to be conceptually similar to Triandis' Collectivism, while modernity is similar to Individualism. However, as described above, the focus of most cross-cultural studies conducted by Westerners is on cross-cultural modalities that are common across different nations and cultural groups. Inconsistency was showed in the results when compared different Chinese societies with different Western countries including Bond's Chinese Culture Survey, because the purpose of such studies is not to tap the Chinese culture, but to do cross-cultural comparison, hence commonalities are necessary to this goal. So, Yang's scale is more relevant to Chinese cultures in that it focuses on unique features of Chinese culture. This might make the scale more sensitive when it comes to measure the change of cultural patterns among Chinese people. Another advantage Yang's instrument has is that it includes both Chinese (traditional) and Western (modern) values, which makes it closer to the requirement of acculturation and cultural orientation studies, not traditional cultural value

studies. In addition, Chinese people's traditional/modern orientations differ in different domains. For example, they tend to maintain traditional values in family life while change toward modern values in other social life. This interpretation of results also showed the similarity of their study with cultural orientation studies. In fact, although Yang did not explicitly call his study as cultural orientation research, the subject matter (cultural changes among Chinese people under influences of outside western culture), the structure of his instrument and the way of interpreting the results to a great extent matches the framework of cultural orientation studies. Hence, Xue (2004) designed her scale in a similar structure as Yang's Traditionality-Modernity framework. Also, she borrowed some of Yang's concepts to label the factors in his scale, such as Filial Piety, Gender Discrimination.

Some of the same factors appeared in some acculturation studies. Kim, Atkinson and Yang (1999) were not satisfied with the part of Asian culture in existing western acculturation measurement, so they generated a more relevant Asian Cultural Value Scale through four studies. The original items were collected through three ways: reviewing literature, conducting a national survey of Asian American psychologists, and focus group discussion. Meanwhile, after searching through acculturation literature, they added additional two aspects to their acculturation instrument: cultural identity and cultural knowledge. Cultural identity was defined as one's attitude toward one's cultural identification, attitudes toward the indigenous culture, pride toward the dominant groups, and level of comfort toward people of indigenous and dominant groups. Cultural knowledge includes cultural information like historical leaders and historical significant

of cultural activities. For the section of Asian Cultural Value, fourteen statements were identified:

- Ability to Resolve Psychological Problems
- Avoidance of Family Shame
- Collectivism
- Conformity to Family and Social Norms and Expectations
- Deference to Authority Figures
- Educational and Occupational Achievement
- Filial Piety
- Important of Family
- Maintenance of Interpersonal Harmony
- Placing Other's Needs Ahead of one's Own
- Reciprocity
- Respect for Elders and Ancestors
- Self-Control and Restraint
- Self-Effacement

### **The Framework of Cultural Orientation Scale**

These previous studies and instruments shed lights on Xue's study (2006) about cultural orientation among Chinese high school students. The concept of cultural orientation, the contents of their instrument and the way of building their instrument (e.g. literature review, interviews and focus group studies) provided the theoretical and empirical basis for her study. After cluster analysis in preliminary study, Xue first

identified twelve psychological constructs. Six of them are from Focus Group Discussion and Interviews, including Appearance, Consumerism, Dating Attitude, Being Interested in Western Culture, Being proud of Being Chinese and Valuing Music or Sports; another five were from Yang et al's work, including Femininity-Masculinity, Filial Piety, Respect for Elders, and Obedience to Authority or Parents, and Hui & Triandis's Individualism/Collectivism. In addition, two behavioral constructs representing westernization are added: Using Foreign Products and Speaking English Daily.

After three empirical studies, two Western behavioral constructs "Using Foreign Products"; "Speaking English Daily and Valuing Music or Sports" were eliminated due to the issue of reliability and validity. The final scale had ten factors covering both behaviors and values, grouped into two subscales:

Westernization Scale:

- Appearance Preference
- Being Interested in Western Culture
- Dating Attitude
- Consumerism

Traditional Scale:

- Filial Piety
- Respect Elders
- Gender Discrimination
- Chinese Pride
- Individualism/Collectivism
- Obedience to Authorities

As seen, Appearance Preference, Consumerism, Dating Attitude and Interested in Western are loaded on Western orientation construct, while the rest like Gender Discrimination, Individualism/Collectivism, Chinese pride, Respect toward Elder, Filial Piety and Obedience to Authority are loaded on Indigenous/Traditional orientation. These two subscales were constructed in order to interpret Chinese adolescence cultural orientation in a bidimensional model. However, because Gender Discrimination cross loaded on both second-order factors, this factor was excluded from further study, resulting in nine factors in her study of cultural orientation and drinking behaviors.

### **Cultural Orientation and Drinking Behaviors**

Looking into human history, alcohol use has been seen as a part of family, social or religious life. Different societies have different views and practices of alcohol (Hanson, 1995). In this sense, drinking practices are influenced by sociocultural factors. With a recorded history of 7000 years of alcohol use, China has developed its own alcohol culture, which considers alcohol use as an integral part of daily life. On the other hand, the reform of economy in China and the resulting influx of western culture have changed Chinese society (Shell, Newman & Fang, 2010). Whether this sociocultural change is associated with drinking pattern is worth investigation.

Few studies have directed their attention to differences in drinking behaviors resulting from the cultural development within a society. Eide, Acuda and Roysamb (1998) tapped this area. With the analysis of 3640 participants, they found out that local and global cultural orientations were revealed as distinctive mediators of the relationship

between individual characteristics and different type of alcohol people consumed. Xue's study (2004, 2006) also showed that western oriented and bicultural high school students were likely to drink more than their traditionally oriented peers. Another study conducted by Shell, Newman and Fang (2010) indicated similar results. They investigated 1020 high school students in Beijing and found that cultural orientation had influences on high school student's drinking and this influence is partially mediated by cultural orientation influences on their drinking expectancies and self-regulation self-efficacy of drinking. Western and less traditional cultural orientation led to more drinking, lower self-efficacy and more positive drinking expectancies.

These empirical studies revealed that alcohol use was associated with culture. Different cultural orientations result in different alcohol practices. The present study will try to find out whether the relationship between alcohol use and culture can be seen among Chinese university students.

## **Chapter 3**

### **METHOD**

The data collection and analysis in this study involved two stages: qualitative and quantitative processes. The qualitative procedure was for understanding how the targeted population actually views Chinese and Western cultures. The information then was compared with Xue's instrument and helped identify the possible changes. The quantitative procedure was used to verify these changes, to finalize the instrument and to examine the relationship between cultural orientation and drinking.

#### **Qualitative Procedure**

This stage of study was conducted in the form of Interviews and Focus Group Discussions (FGD). Thirty-one college students (at the age of 19 to 25) from a major city of Southwestern China (N= 16 for interview, N=15 for FGD) participated in the study during June and July 2010. Each in-depth interview usually consisted of 1-2 participants, and FGD 7-8 participants. The conversation always began with open-ended questions like "In your opinion, what are the differences between Chinese and Western cultures?" or "What values do you think are important in Chinese culture?" Interviews or FGDs ended when no new information came out. Conversations usually took 60-120 minutes and were recorded with permission. The participants were asked not to reveal any personal information that could tell their identities. Also, quick notes were taken during the talk. The key points were sometimes used to ask other participants' opinions at the end of the next interview or FGD so that the interpretations of those key points can be expanded and

deepened. Later, these taped conversations were transcribed into notes. The recordings were deleted to protect the participants after this process.

I carefully analyzed these notes and turned them into statements that suited as instrument items. Chinese colleagues in Nebraska Prevention Center for Alcohol and Drug Abuse discussed with me on the meaning of these items and deleted repeated statements with the same meaning. Several Chinese college students in China and United States were also asked to comment on the wording and meaning of these statements. Then, these individual items were roughly grouped into factors, so that it was easier to compare them with Xue's cultural orientation scale. Using Xue's instrument as a base, Items with new information were added. And without altering their meanings, the wording of two original items was slightly changed to suit university students. This procedure resulted in a scale with a total of 116 items.

## **Quantitative Procedure**

### ***Questionnaire***

The instrument used in this study included three parts: demographic information, Cultural Orientation scale and a drinking question. Demographic section has four questions covering age, gender, grade and hometown. Cultural Orientation scale has 116 items on a 5-Likert scale ("1= absolutely disagree", "2= disagree", "3= neither disagree nor agree", "4= agree", "5= absolutely agree"). Drinking behavior was measured by one question: "How many days did you drink in last 30 days?" (1= "Never drink", 2= "didn't drink in last month", 3= "1-3 days", 4= "4-9 days", 5= "10-20 days", 6= "> 20 days").

### ***Data Collection and Data Cleaning***

Colleagues in Beijing Normal University collected the data and entered the raw data in SPSS. Then they sent the datasets to the principal investigator of this study via email. The sample included 1439 students from different universities in Beijing, Kunming and Wuhan, which located in Northern, Southwestern and Central China, respectively. For the cultural orientation scale, cases were deleted if the participant left about half of those 116 items unanswered, or missed at least two items on each possible factor that identified by previous studies. This yielded a total of 1421 valid cases for the analysis of cultural orientation scale.

The data of drinking behaviors was added later after finalized the cultural orientation scale. Because participants in Beijing and Kunming answered the drinking question twice, cases that contained inconsistent answers to the drinking question were deleted. Eventually, 1303 valid cases were left for analysis of relationship between cultural orientation and drinking.

### ***Characteristics of the Sample***

Among the remaining 1303 students, 41% were Male and 59% Female; the age of participants rang from 17 to 30 ( $M= 20.23$ ,  $SD=1.703$ ); most of participants (66%) were freshmen; 15.9% were sophomore and 12% junior; only 5.7% were senior and 6% graduate students. These university students came from different areas all over the country, among which 6.7% were from State-ruled cities, 15.8% from province capitals, 23% from district cities, 22.6% from counties and 37.3% from rural areas (See Table 1).

Table 2. Demographic Information of the Sample

	Male			Female			Total
	N (%)	Mean	SD	N (%)	Mean	SD	N(%)
Age		20.62	1.85		19.93	1.49	1268(100)
Gender	533(41.0)			767(59.0)			1300(100)
Grade							
Freshmen	291(54.6)			558(67.1)			849(66.0)
Sophomore	81(15.2)			123(14.8)			204(15.9)
Junior	53(9.9)			102(12.3)			155(12.0)
Senior	60(11.3)			13(1.6)			73(5.7)
Graduate	41(7.7)			36(4.3)			77(6.0)
Total	526(40.9)			761(59.1)			1287(100)
Hometown							
State-ruled City	28(5.3)			58(7.0)			86 (6.7)
Province Capital	74(13.9)			129(15.6)			203 (15.8)
District City	111(20.8)			184(22.2)			295 (23.0)
County	105(19.7)			185(22.4)			290 (22.6)
Rural area	207(38.8)			271(32.8)			478 (37.3)
Total	525(41.0)			757(59.0)			1282(100)

### *Statistical Analysis*

Some items were worded to reflect western perspectives. They were reverse coded before analysis so that the higher the item score was, the more traditional orientation it indicated.

The cultural orientation scale included both the old items from Xue's high school cultural orientation scale and new items from interviews and Focus Group Discussions with university students. To answer the first and second research questions, I first ran a confirmatory factor analysis in Mplus 5.0 only with items from Xue's scale. The previous studies have identified ten factors for the cultural orientation scale. This analysis can tell if Xue's ten-factor structure is still valid for the current population. The assessment of Internal Consistency was used to screen out the individual items with low item-total correlation. Then, the rest items combined with the new added items were run with exploratory factor analyses in SPSS 19. The next step was to verify the measurement model of the cultural orientation scale with confirmatory factor analysis again. The previous studies also found that the ten factors clustered on two second-order factors----- traditional and western culture. Finally, I used CFA to find out if these factors still loaded on two second-order factors (unidimensional or bidimensional model).

The third research question answered the question of cultural orientation categories. Factor scores were participant's mean scores on each factor. Scores of the second-order factors were the standardized scores obtained by using EFA on the two second-order factors. Thus, each participant had two scores representing "Traditionality" and "Westernization", respectively. Based on this, the two-step cluster analysis was conducted to determine how many categories in cultural orientation and how many people in each category.

Regarding the drinking question, participants were classified into three general drinking types (details are showed in *Results* section). Then, Multinomial Logistic Regression and Binary Logistic Regression analyses were used to find out the relationship between cultural orientation and drinking types.

## Chapter 4

### RESULTS

One thousand four hundred and thirty nine Chinese university students helped to fill out the questionnaire. After cleaning the data, a total of 1421 valid cases were left for data analysis of cultural orientation scale. After refined the scale, data for the drinking behavior were added, resulting in a total of 1303 (91%) valid cases, which means the analysis of cultural orientation and drinking behaviors were run with a subset of the full data file.

There are four parts in this chapter: 1) Cultural Orientation Scale; 2) Model Specification of the Cultural Orientation; 3) Characteristics of Cultural Orientation; and 4) Cultural Orientation and Drinking Behaviors.

#### **Cultural Orientation Scale**

*Research question 1: What is the structure of the new instrument?*

In previous studies, ten factors were identified: 1) Respect Elders; 2) Obedience to Authority; 3) Filial Piety; 4) Chinese Pride; 5) Interest in Western; 6) Appearance Preference; 7) Dating Attitude; 8) Consumerism; 9) Gender Discrimination; 10) Collectivism.

A confirmatory factor analysis with Maximum Likelihood estimation was conducted in Mplus 5.0, with items only from Xue's original cultural orientation scale. This can tell whether data from the current population still form a general ten-factor model as indicated by Xue's study (2006). The results showed that there was a close fit between the ten-factor model and the observed data (CFI=. 575<. 95, RMSEA=. 049<.

05, SRMR=. 079<. 08; see the criteria in Hu & Bentler, 1999). Then, the internal consistency analysis with software SPSS 19 was conducted to test the reliability of these items. The Cronbach's Alpha ranged from .442 to .808. Three of the ten factors (Obedience to Authority, Individualism-Collectivism, Dating Attitude) had Cronbach's Alpha lower than .60, suggesting relatively poor internal consistency. Based on these two analyses, items with both loading and item-total correlation under .30 were deleted.

Interviews and Focus Group Discussions in the first stage of the study aimed to identify new information more relevant to current population. And, if the original ten-factor structure still stands in this new population, these new items generated from qualitative data were expected to make improvement to the original scale based on the collected data. Thus, after affirming the relevance of original items and the need to improvement, all the new items were brought in to determine the structure of the new scale. A series of Exploratory Factor Analyses and Internal Consistency tests were conducted. After several rounds of analyses, the pool of old and new items eventually formed a structure of overall 10 factors: 1) Gender Discrimination; 2) Chinese Pride; 3) Appearance Preference; 4) Interest in Western Culture; 5) Filial Piety; 6) The Doctrine of Mean; 7) Consumerism; 8) Respect Elders; 9) Collectivism; 10) Dating Attitude.

As showed in the results, the statistical data did not support the factor "Obedience to Authority" in the old instrument even by adding new items. Instead, 7 items converged on a new factor. The content of this factor includes the avoidance of conflict, risk and emotion exposure, which was pertinent to the concept "The Doctrine of Mean" in Chinese culture, thus labeled this name (Appendix D).

Also, three factors “ Respect Elders”, “ Collectivism” and “ Dating Attitude” needed improvement because only 3-4 items had adequate loadings and good internal consistency in each of these three. So, to cover enough content of these three factors, the deleted old items in the first round analysis due to low loadings and reliabilities were put back since they had stood through five tests of previous studies. Along with any new items that do not converge during the factor analysis, these three factors were restructured, resulting in 5 items in Respect Elders, 7 items in Collectivism and 8 items in Dating Attitude. In Model Specification, “ Dating Attitude” was further reduced to 5 items due to the misspecification when analyzing the second-order factors. The final cultural orientation scale contained a total of 67 items.

### **Model Specification of the Cultural Orientation**

*Research question 2: What is the model of cultural orientation?*

After determining the measure model of the instrument, then it was in need to investigate the relationships among these ten factors, i.e. the structural model of the instrument. Also, the structural model can provide the information of how to interpret the cultural orientation states, as whether Berry’s theory was applicable to cultural orientation among Chinese university students.

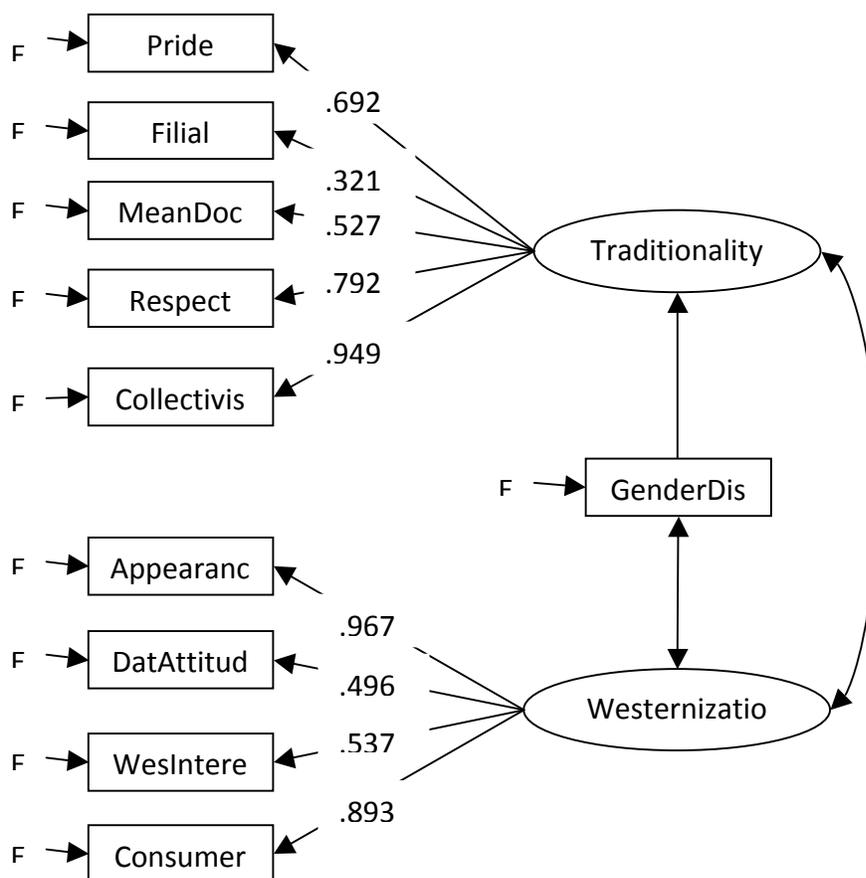
In the factor analysis, these factors showed correlations among each other, suggesting the existence of second-order factors. First, all ten factors were forced to loaded on a single second-order factor. The result did not support this model because its poor fit (CFI=. 620<. 95, RMSEA=. 048<. 05, SRMR=. 122>. 08; Hu & Bentler, 1999). In addition, two of the factors “ Appearance” and “ Being interested in Western culture”

did not load on this second-order factor, suggesting these two may load on another second-order factor.

Then, 3 dimensional models with two second-order factors were examined. In the first model, four factors “Appearance Preference”, “Dating Attitude”, “Interest in Western Culture” and “Consumerism” loaded on the second-order factor “Westernization”, while five factors “Gender Discrimination”, “ Chinese Pride”, “Filial Piety”, “ The Doctrine of Mean”, “ Respect Elders”, “ Collectivism” loaded on “Traditionality”. Overall, this model had a close fit to the data (CFI=. 686<. 95, RMSEA=. 045<. 05, SRMR=. 072<. 08; Hu & Bentler, 1999). However, “Gender Discrimination” did not have a high loading on “Traditionality” ( $\lambda=.073$ ).

So, a second model was examined. The second dimensional model also included the same second-order factors “Westernization” and “Traditionality”, except “Gender Discrimination” did not load on any second-order factors. The results showed that this model had a close fit to the data (CFI=. 690<. 95, RMSEA=. 045<. 05, SRMR=. 070<. 08; Hu & Bentler, 1999).

Figure 1. The second bidimensional model



The only difference between the first and second dimensional models was that “Gender Discrimination” did not load on either “Westernization” or “Traditionality”. The reason deserved further investigation. The result of one-way ANOVA revealed that male scores in “Gender Discrimination” were significantly higher than female scores ( $F(1, 1415) = 354.142, p = .000$ ), indicating males were more tradition-oriented than females on this factor. In addition, the correlations “Gender Discrimination” with both second-order factors were small given the large sample size ( $r = .067$  with “Traditionality” and  $r = -.314$  with “Westernization”; Cohen, 1992). This suggested that “Gender Discrimination” was a separate factor that independent of cultural orientation.

Hence, to further investigate participant's cultural orientation states, "Gender Discrimination" was not accounted for. Therefore, in the third model, "Gender Discrimination" was excluded. The result confirmed the close fit of this third model (CFI=. 670<. 95, RMSEA=. 047<. 05, SRMR=. 065<. 08; Hu & Bentler, 1999)

Figure 2. The third bidimensional model

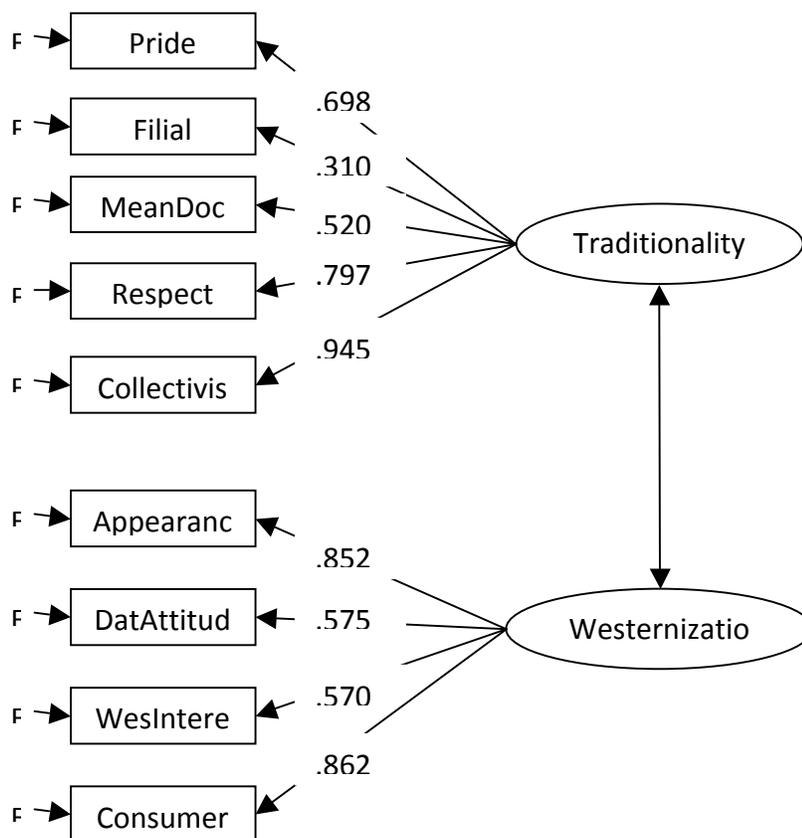


Table 3. Scale factor loadings in the third model

<b>Factor</b>	<b>Loading</b>
<b>Factor 1. Chinese Pride(7)</b> Q77 Q43 Q63 Q21 Q8 Q35 Q53	.688 .664 .628 .515 .473 .466 .373
<b>Factor 2. Appearance(9)</b> Q84 Q108 Q76 Q52 Q62 Q22 Q44 Q33 Q116	.525 .504 .471 .440 .440 .436 .435 .433 .426
<b>Factor 3. Interest in Western Culture(8)</b> Q97 Q106 Q102 Q42 Q74 Q86 Q20 Q32	.613 .510 .491 .480 .422 .381 .354 .287
<b>Factor 4. Filial Piety (5)</b> Q81 Q99 Q55 Q40 Q13	.652 .590 .544 .539 .367
<b>Factor 5. The Doctrine of Mean (7)</b> Q51 Q45 Q46 Q82 Q36 Q120 Q105	.531 .492 .485 .456 .458 .411 .411
<b>Factor 6. Consumerism (5)</b> Q88 Q19 Q30	.545 .384 .289
<b>Factor 7. Respect Elders (6)</b> Q56 Q27 Q90 Q5 Q72 Q98	.616 .528 .491 .456 .438 .401
<b>Factor 8. Collectivism(7)</b>	

Q85	.561
Q71	.519
Q61	.513
Q25	.410
Q24	.402
Q60	.409
Q83	.309
<b>Factor 9. Dating Attitude(5)</b>	
Q66	.673
Q17	.635
Q89	.425
Q80	.271
Q16	.200

Internal consistency test showed that the reliabilities of these ten factors ranged from .362 to .841. “Consumerism” had a very low reliability ( $\alpha=.362$ ) and “Dating Attitude” did not reach a very good internal consistency ( $\alpha=.550$ ).

Table 4. Internal consistency of the new scale

<b>Factor</b>	<b>Cronbach's <math>\alpha</math></b>
Gender Discrimination*	.841
Chinese Pride	.742
Appearance	.702
Interest in western culture	.654
Filial Piety	.659
The Doctrine of Mean	.657
Consumerism	.362
Respect Elders	.644
Collectivism	.626
Dating Attitude	.550

\*Note: “Gender Discrimination” was excluded in the further analysis of cultural orientation characteristics.

### **Characteristics of cultural orientation**

*Research Question 3: what are the characteristics of cultural orientation among Chinese university students?*

The data failed to support the unidimensional model, suggesting that for Chinese university students, their cultural orientation process cannot be described as a single bipolar continuum. On the other hand, “Gender Discrimination” did not load very well on the second-order factor, thus was left out in the depiction of cultural orientation states. So, the third bidimensional model was chosen for answering research question 3. The fact that the nine factors loaded on two separate second-order factors with a very small correlation ( $r = -.058$ ) indicated that “Westernization” and “Traditionality” developed independently during cultural orientation. Thus, for each participant, they should have a state on each of these two orientations. Theoretically, this would result in a combination of four different cultural orientation states: traditional, western, bicultural and marginal orientations.

Because of the large sample size ( $N=1421$ ), a two-step cluster analysis based on the two second-order factors was conducted to examine if this theoretical classification holds. Without noise, four clusters emerged in the analysis. Before data analysis, all the items had been coded to reflect the same direction that the high score indicated traditional orientation. So, on “Traditionality” subscale, high scores were desirable, because they indicated traditional orientation; while on “Westernization” subscale, low scores were desirable, because they indicated western orientation. As a result, the four theoretical cultural orientation classifications were supported. 36.8% students were Traditional oriented, 32.7% were Western oriented, followed by 23.8% Bicultural oriented. only 6.8% students were Marginal oriented.

Table 5. Classification of cultural orientation

Classification	N	%	Mean	
			Traditionality	Westernization
Traditional	523	36.8	.15	.90
Western	464	32.7	-.49	-.73
Bicultural	338	23.8	1.02	-.52
Marginal	96	6.8	-2.03	0.44
Total	1,421	100.00	0	0

\* Note: the total number of people was later reduced to 1303 because some participants were inconsistent on the drinking question.

In last section, “Gender Discrimination” did not load on the two second-order factors. ANOVA results indicated that males were more traditional than females on gender view. The crosstab further revealed that among all four cultural orientations, more males were “more traditional” (above the factor mean score) on “Gender Discrimination”, while females less traditional (below the factor mean score) (see Table 6)

Table 6. Gender discrimination (GD) x Cultural orientations by gender

Gender	GD	Cultural Orientation			
		Traditional N(%)	Marginal N(%)	Bicultural N(%)	Western N(%)
Male	Less traditional	54(28.4)	18(36.0)	18(14.5)	45(20.9)
	More traditional	136(71.6)	32(64.0)	106(85.5)	170(79.1)
Female	Less traditional	246(73.9)	29(63.0)	126(59.2)	155(63.0)
	More traditional	87(26.1)	17(37.0)	87(40.8)	91(37.0)

### Cultural Orientation and Drinking Behaviors

*Research Question 4: What is the relationship between cultural orientation and drinking behaviors?*

### *Drinking types*

The question to measure participant's drinking behaviors was "How many days did you drink in *the last 30 days*?" The participants were divided into three type of drinkers based on their answers: Nondrinker ("Never drink", N=248, 19.03%), Occasional drinker ("Didn't drink in last month", N= 550, 42.21%), and Regular drinker (from "drink 1-3 days" to "drink>20 days, N= 505, 38.76%).

### *Cultural Orientation and Drinking Behaviors*

Since both cultural orientation and drinking behaviors were categorical variables, multinomial logistic regression analysis with nondrinker as reference was conducted. The result indicated that between *Nondrinkers and Regular drinkers*, only traditionally oriented group had significantly less regular drinkers ( $e^B = .620$ ,  $p = .02$ ), whereas among other three cultural orientations, there were no significant differences between these two drinking types. Between *Nondrinkers and Occasional drinkers*, all four cultural orientations had no significant differences (Table 8).

Table 8. Comparisons of three drinking types among cultural orientations

	$\Delta\chi^2$	B	SE	OR	95% CI
	14.667*				
Occasional drinker					
Western		.40	.215	1.040	[.683, 1.585]
Marginal		-.097	.354	.907	[.453, 1.817]
Traditional		-.079	.201	.924	[.622, 1.371]

Regular drinker				
Western	.032	.213	1.032	[.679, 1.568]
Marginal	.085	.344	1.088	[.554, 2.137]
Traditional	-.478	.205	.620*	[.415, .927]

Reference group: nondrinker, bicultural orientation

To get a full understanding of the cultural orientation influences on all three drinking types, logistic regression analysis with occasional drinker as reference was used to compare occasional drinkers and regular drinkers among different cultural orientations. The result suggested that only traditionally orientated group had significant less regular drinkers than occasional drinkers and all other three cultural orientations had no significant differences in the number of occasional and regular drinkers ( $e^B = .671$ ,  $p = .15$ ; Table 9)

Table 9. Comparison between occasional and regular drinkers among cultural orientations

	$\Delta\chi^2$	B	SE	OR	95% CI
	10.799*				
Western		-.008	.165	.992	[.718, 1.371]
Marginal		.182	.272	1.200	[.704, 2.043]
Traditional		-.399	.164	.671*	[.487, .925]
Constant		.048	.126	1.049	

## Chapter 5

### DISCUSSION

The main purposes of my study were to develop a cultural orientation instrument for Chinese university students and to investigate the relationship between cultural orientation and drinking behaviors.

#### **Cultural Orientation Scale**

Based on the original Chinese high school student cultural orientation scale, the current study modified this scale to suit the population of Chinese university students. Even though the data analysis revealed a ten-factor structure for the new scale as the previous scale, there were some noteworthy changes that deserve discussions.

First, a new factor “The Doctrine of Mean” was generated from the current study. The content of this factor were all new compared to the previous scale, indicating some new values that haven’t been captured by the previous high school student cultural orientation instrument, although similar contents such as maintenance of interpersonal harmony, do not take extreme and conceal emotion have been mentioned in the literature (Cheung, Leung, Fan, Song, Zhang, & Zhang, 1996; Kim, Atkinson & Yang, 1999) and the name “The Doctrine of Mean” was referred to as the typical Chinese values during interviews and Focus Group Discussions.

Second, the old factor “Obedience to Authority” failed to converge. This may indicate two problems. This factor included items reflecting both traditional and western views. Even after recoding the western-view items, these items did not load on the same factor. This means that the traditional and western views did not necessarily imply the

opposite values on this factor. However, for “Obedience to Authority”, after balancing out this confounding effect by only including items reflecting traditional or western views, they still showed low factor reliability and comparatively low loadings. The reason was that most of the items in this factor were related to teacher, while conceptually the range of “Authority” in Chinese culture is from teacher, parents, to elder people and superiors. Thus, this factor can overlap with other factors, such as “Respect Elders” and “Filial Piety”. Also, for different age group, the concept of “authority” could have different meanings. For example, for high students, teachers might be the typical authority figures; while for university students, teachers might not be such important authority as superiors, elder people or other group of people with higher social status.

The factor “Consumerism” also had the same confounding effect as “Obedience to Authority”. This factor originally contains 8 items, with 5 items reflecting the traditional values on how people spend their money, such as the tendency of saving, and 3 items reflecting the western values, such as the tendency of spending in advance. In exploratory factor analysis, these 8 items loaded on two separate factors, representing traditional and western views on this issue, respectively. The 3 western items remained for two reasons. In previous studies among high students, this factor was generated to represent western consumerism. Also, for the balance of the number of factors on the second-order factors (5 factors on “Traditionality” and 4 factors on “Westernization”), the 3 western items were kept so that “Consumerism” loaded on the second-order factor “Westernization”. Otherwise, with those deleted 5 traditional items, it would have loaded on “Traditionality”, resulting in 6 factors in this second-order factor. These 3 items fitted well as a factor as well as on the global factor according to their loadings, however, the

reliability of “Consumerism” was very low (see Table 4). This could result from the small number of items in this factor.

### **Cultural Orientation Model**

The current study supported the bidimensional model not unidimensional model. This conclusion can be drawn on that factors loaded on two global factors, representing traditional and western cultures, respectively. And the size of the correlation between these two global factors also indicated that they were two independent factors, instead of two ends on a bipolar continuum like what unidimensional model suggests. So, this means that cultural changes among individuals towards these two cultures could develop independently at the same time without rejecting each other. As mentioned in the first two chapters, bidimensional model has received a great deal of support in acculturation studies, and the current study just added another supporting evidence for bidimensional model to the small body of cultural orientation studies. It also corresponds to the theory in literature that individuals in cultural orientation process may selectively integrate parts of the external culture, thus features of both cultures may remain. (Chen, Martinez & Bond, 2008).

However as another widely supported model in literature, multidimensional model was not examined in current study because of the structure of the instrument. In literature, most studies that adopted multidimensional model designed their instrument in a symmetrical structure. For each factor or domain, it has two set of items covered the same content but reflected two opposite cultural views (e.g. Miller, 2007, 2010). However traditional and western views in current Chinese cultural orientation instrument

had their own unique factors. And, almost all items within each factor only reflect the one culture. For example, “Appearance” represented western cultural views, so all its items were worded to reflect western culture.

Another issue was that in acculturation and cultural orientation literature, researchers believed cultural instrument should include both value and behavioral aspects (e.g. Phinney, 1996). Although current instrument did not explicitly list value and behavioral aspects, some factors were value-based such as “Chinese pride”, and some were behavior-based such as “Appearance”, while some were both such as “Collectivism”.

### **Cultural Orientation Characteristics**

The four categories of cultural orientation states Traditional, Western, Bicultural and Marginal orientation accord with Berry’s description of four classifications of individual acculturation results. During cultural orientation, individuals may choose to assimilate the external culture, stay with their own culture, or integrate both cultures. Most students were Traditional, Western and Bicultural oriented, indicating that these three strategies were most common among cultural orientation. While another situation in Berry’s theory was Marginalization. According to his theory, marginalized situation may result from that individuals try to integrate into the dominant culture by abandoning their own culture, but find themselves rejected by the dominant culture. This may apply to acculturation process in which individuals feel the need to integrate into the dominant culture in order to function in the society. This is because the success of their choice also

depends on whether the dominant group was tolerant enough to accept outsiders (Berry, 1997, 2001).

This explanation does not apply to cultural orientation process. During this process, individuals are most likely voluntary to make changes instead of being forced by the need of survival and function. They are unlikely to experience the situation where they have to abandon their own culture. Also, as the dominant group, it is impossible for them to find out that they are rejected by the new culture. An alternative explanation posed by Stonequist is more sensible for cultural orientation process. Stonequist (1935, 1937) believed marginalized state is a transitional state, resulting from the cultural conflict. So, marginalized individuals may be in a temporary situation where they question their own tradition meanwhile do not really identify with the external culture. For them, this may be an exploratory stage. For current participants, only a very small proportion of students were classified into this category. This may also indicate that since marginalization is a transitional stage, it should be a less common situation than the other three orientations.

Participants' perceptions of gender role is also another issue deserves attention. The interesting issue was that no matter they are traditional, western, bicultural or marginalized, males were always more traditional than females on this issue. It may be due to that males tend to remain traditional because they have the social status and power while females expect changes to obtain equality and increase their power. Previous literature believed gender role was important factor to measure eastern and western cultural differences (e.g. Yang, 1996; Kim, Atkinson & Yang, 1999). Current study seems to suggest it may not be just a simple issue of cultural difference, but a phenomenon of societal change.

### **Cultural Orientation and Drinking**

Only traditionally oriented group had significantly less regular drinkers. More western values and less traditional values both resulted in more regular drinkers compared with traditional students. This result indicated that Chinese traditional values serve as a protective factor in preventing student drinking more. It also corresponds previous studies about cultural orientation influence on student's drinking behaviors.

### **Limitations and Implications**

This instrument has some reliability and validity issues. First of all, previous researchers have mentioned the concept of “Obedience to Authority” as an important factor of Chinese culture or measuring cultural difference (Hofstede, 1980; Kim, Atkinson & Yang, 1999). However, it did not stand in current study. Future studies can find better items to capture the true meaning of authority and make it separate from other concepts such as Filial Piety and Respect Elders.

Secondly, the confounding effect caused by “Consumerism” indicates in future studies items within each factor should be all worded to reflect the same cultural view. In addition, “Consumerism” needs more and better items to improve its reliability. “Collectivism” also needs to be improved because some of the items had low item-total correlations. Besides, the new factor “The Doctrine of Mean” needs more studies to confirm its validity.

Current study target at Chinese university students population, however, most of the participants were freshmen and females, so it may bias the results and affect its

generalizability. Future studies need to use more diverse participants that can represent the population of Chinese university students.

The influence of cultural orientation on college student's drinking behaviors further validate the importance of Chinese traditional culture in Chinese people's drinking practices. Future alcohol intervention programs that emphasize sociocultural influences may draw reference from this study. And, this study also indicates that alcohol strategies and policies derived from western context may not suitable for Chinese society.

## References

- Abe-Kim, J., Okazaki, S., Goto, S. G. (2001). Unidimensional versus multidimensional approaches to the assessment of acculturation for Asian American populations. *Cultural Diversity and Ethnic Minority Psychology, 7*(3), 232-246.
- Arends-Toth, J., & Van De Vijver, F.J.R. (2003). Multiculturalism and acculturation: views of Dutch and Turkish-Dutch. *European Journal of Social Psychology, 33*, 249-266.
- Arnett, J. J. (2002). The psychology of globalization. *American Psychologist, 57*, 774–783.
- Ben-Ari, A., & Lavee, Y. (2004). Cultural orientation, ethnic affiliation, and negative daily occurrences: A multidimensional cross-cultural analysis. *American Journal of Orthopsychiatry, 74*(2), 102-111.
- Berry, J.W. (1980). Acculturation as varieties of adaptation. In A.M. Padilla (Ed.). *Acculturation: Theory, models, and some new findings* (pp. 9-25). Boulder, CO: Westview Press.
- Berry, J.W., Kim, U., Minde, T., & Mok, D. (1987). Comparative studies of acculturative stress. *International Migration Review, 21*(3), 491-511.
- Berry, J. W., & Sam, D. L. (1997). Acculturation and adaptation. In J. W. Berry, M. H. Segall, & C. Kagitcibasi (Eds.), *Handbook of cross-cultural psychology: Social behavior and applications* (Vol. 3, 2<sup>nd</sup> Ed, pp. 291–326). Boston: Allyn & Bacon.
- Berry, J. W. (1997). *Immigration, acculturation, and adaptation*. *Applied Psychology: An International Review, 46*, 5–68.

- Berry, J. W. (2001). A psychology of immigration. *Journal of Social Issues*, 57, 3, 615-631.
- Betancourt, H., & Lopez, S. R. (1993). The study of culture, ethnicity, and race in American psychology. *American Psychologist*, 48(6), 629-637.
- Bond, M. H. (1988). Finding universal dimensions of individual variation in multicultural studies of values: The Rokeach and Chinese value surveys. *Journal of personal and Social Psychology*, 55, 1009-1015
- Bond, M. H. (1996). Chinese Values. In M. H. Bond. *The handbook of Chinese psychology*. (pp.208-226). Hong Kong: Oxford University Press.
- Bollen, K. A. (1989). *Structural equations with latent variables*. NY: Wiley.
- Brumann, C. (1999). Writing for culture: Why a successful concept should not be discarded. *Current Anthropology*, 40, S1-S14.
- Cabassa, L. J. (2003). Measuring acculturation: Where we are and where we need to go. *Hispanic Journal of Behavioral Sciences*, 25(2), 127-146.
- Capps, R. C., Tinkew, J. B., & Horowitz, A. (2010). Acculturation and father engagement with infants among Chinese and Mexican-origin immigrant fathers. *Fathering: A Journal of Theory, Research, & Practice about Men as Fathers*, 8(1), 61-92.
- Castillo, L. G. & Caver, K. A. (2009). Expanding the concept of acculturation in Mexican American rehabilitation psychology research and practice. *Rehabilitation Psychology*, 54(4), 351-362.
- Chen, S. X., Martinez, B. V., & Bond, M. H. (2008). Bicultural identity, bilingualism, and psychological adjustment in multicultural societies: immigration-based and globalization-based Acculturation. *Journal of Personality*, 76(4), 803-838.

- Chen, J. C., & Danish, S. J. (2010). Acculturation, distress disclosure, and emotional self-disclosure within Asian populations. *Asian American Journal of Psychology*, 1(3), 200-211.
- Cheung, F. M., Leung, K., Fan R. M., Song, W. Z., Zhang, J. X., & Zhang, J. P. (1996). Development of the Chinese personality assessment inventory. *Journal of Cross-Cultural Psychology*, 27(2), 181-199.
- Cheung, F. M., Cheung, S. F., & Leung, F. (2008). Clinical utility of the cross-cultural (Chinese) personality assessment inventory (CPAI-2) in the assessment of substance use disorders among Chinese men. *Psychological Assessment*, 20(2), 103-113.
- Cheung-Blunden, V. L. & Juang, L. P. (2008). Expanding acculturation theory: are acculturation models and the adaptiveness of acculturation strategies generalizable in a colonial context? *International Journal of Behavioral Development*, 32(1), 21-33.
- Chia, A. L., Costigan, C. L. (2006). Understanding the multidimensionality of acculturation among Chinese Canadians. *Canadian Journal of Behavioral Science*, 38(4), 311-324.
- Chung, R. H. G., Kim, B.K., & Abreu, J.M. (2004). Asian American multidimensional acculturation scale: development, factor analysis, reliability, and validity. *Cultural Diversity and Ethnic Minority Psychology*. 10(1), 66-80.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155-159.
- Corral, I., & Landrine, H. (2008). Acculturation and ethnic-minority health behavior: A test of the operant model. *Health Psychology*, 27(6), 737-745.

- Cuellar, I., Arnold, B., & Maldonado, R. (1995). Acculturation Rating Scale for Mexican Americans-II: A Revision of the Original ARSMA Scale. *Hispanic Journal of Behavioral Sciences*, 17 (3), 275-304.
- Dere, J., Ryder, A. G., & Kirmayer, L. J. (2010). Bidimensional measurement of acculturation in multiethnic community sample of first-generation immigrants. *Canadian Journal of Behavioral Science*, 42(2), 134-138.
- Eide, A. H., & Acuda, S. W. (1996). Cultural orientation and adolescents' alcohol use in Zimbabwe. *Addiction*, 91(6), 807-814.
- Eide, A. H., Acuda, S. W., Khan, N., Aaroe, L. E., & Loeb, M. E. (1997). Combining cultural, social and personality trait variables as predictors for drug use among adolescents in Zimbabwe. *Journal of Adolescence*, 20, 511-524.
- Eide, A. H., Acuda, S. W., & Roysamb, E. (1998). Cultural orientation and alcohol-type preferences among adolescents in four sociocultural subgroups in Zimbabwe. *Journal of Cross-Cultural psychology*, 29(2), 343-357.
- Feldman, S., Mont-Reynaud, R., & Rosenthal, D. (1992). When East moves West: The acculturation of values of Chinese adolescents in the U.S. and Australia. *Journal of Research on Adolescence*, 2(2), 147- 173.
- Flannery, W. P., Reise, S. P., & Yu, J. (2001). An empirical comparison of acculturation models. *Personality and Social Psychology Bulletin*, 27(8), 1035-1045.
- Graves, T. D. (1967). Psychological acculturation in a tri-ethnic community. *Southwestern Journal of Anthropology*, 23, 337-350.
- Hanson, D. J. (1995). *Preventing alcohol abuse: alcohol, culture and control*. CT: Praeger Publisher.

- Hofstede, G. H. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills: Sage.
- Hofstede, G.H., & Bond, M.H. (1984). Hofstede's culture dimensions: an independent validation using Rokeach's value survey. *Journal of Cross-Cultural Psychology*, 15, 417-433.
- Hofstede, G. H. (1991). *Cultures and organizations: software of the mind*. London: McGraw-Hill.
- Hui, H. C., & Triandis, H. C. (1986). Individualism-Collectivism: A study of cross-cultural researchers. *Journal of Cross-Cultural Psychology*, 17(2), 225-248.
- Jain, A. K., Murty, M. N., & Flynn, P. J. (1999). Data clustering: A review. *ACM Computing Surveys*, 31(3), 264-323.
- Kim, B. S. K., Atkinson, D. R., & Yang, P. H. (1999). The Asian values scale: Development, factor analysis, validation and reliability. *Journal of Counseling Psychology*, 46(3), 342-352.
- Kim, B. S. K., Atkinson, D. R., & Umemoto, D. (2001). Asian cultural values and the counseling process: Current knowledge and directions for future research. *The Counseling Psychologist*, 29(4), 570-603.
- Kim, B. S. K., & Omizo, M. M. (2010). Behavioral enculturation and acculturation, psychological functioning, and help-seeking attitudes among Asian American adolescents. *Asian American Journal of Psychology*, 1(3), 175-185.
- Kline, R. B. (2005). *Principles and practice of structural equation modeling (2<sup>nd</sup> Ed)*. NY: Guilford Publications.

- Kumar, A., & Nevid, J. S. (2010). Acculturation, enculturation, and perceptions of mental disorders in Asian Indian immigrants. *Cultural Diversity and Ethnic Minority Psychology, 16*(2), 274-283.
- LaFromboise, T., Coleman, H. L. K., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. *Psychological Bulletin, 114*, 395-412.
- Lasry, J., & Sayegh, L. (1992). Developing an acculturation scale: A bidimensional model. In N. Grizenko, L. Sayegh, & P. Migneault (Eds.), *Transcultural Issues in Child Psychiatry* (pp. 67–86). Montreal: Editions Douglas.
- Liem, R., Lim, B. A., & Liem, J. H. (2000). Acculturation and emotion among Asian Americans. *Cultural Diversity and Ethnic Minority Psychology, 6*(1), 13-31.
- Lo, Y. (2010). The impact of the acculturation process on Asian American youth's psychological well-being. *Journal of Child and Adolescent Psychiatric Nursing, 23*(2), 84-91.
- Martinic M., Measham F. *Swimming with Crocodiles: The Culture of Extreme Drinking*. New York: Routledge; 2008.
- Mendoza, R. H., & Martinez, J. L. (1981). The measurement of acculturation. In A. Baron (Ed.), *Explorations in Chicano Psychology* (pp.71-82). New York: Praeger.
- McCrae, R. R., Costa, P. T. Jr., & Yik, M. S. M. (1996). Universal aspects of Chinese personality structure. In Michael Harris Bond (Eds). *The Handbook of Chinese Psychology* (pp.189-207). Hong Kong: Oxford University Press.
- McWhirter, E. H., Hackett, G., & Bandalos, D. L. (1998). A causal model of the educational plans and career expectations of Mexican American high school girls. *Journal of Counseling Psychology, 45*(2), 166-181.

- Miller, M. (2007). A bilinear multidimensional measurement model of Asian American acculturation and enculturation: implications for counseling interventions. *Journal of Counseling Psychology, 54*(2), 118-131.
- Miller, M. (2010). Testing a bilinear domain-specific model of acculturation and enculturation across generational status. *Journal of Counseling Psychology, 57*(2), 179-186.
- Nguyen, H. H., Messe, L. A., & Stollak, G. E. (1999). Toward a more complex understanding of acculturation and adjustment: cultural involvements and psychological functioning in Vietnamese youth. *Journal of Cross-Cultural Psychology, 30*(1), 5-31.
- Redfield, R., Linton, R., & Herskovits, M.J. (1936). Memorandum on the study of acculturation. *American Anthropologist, 38*, 149-152.
- Phinney, J. S. (1990). Ethnic Identity in Adolescents and Adults: Review of Research. *Psychological Bulletin, 108*(3), 499-514.
- Phinney, J. S. (1996). When we talk about American ethnic group, what do we mean? *American Psychologist, 51*(9), 918-927.
- Raykov, T., & Marcoulides, G. A. (2006). *A first course in structural equation modeling (2<sup>nd</sup> Ed)*. NY: Psychology Press.
- Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is Acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of Personality and Social Psychology, 79* (1), 49-65.

- Rudmin, F. W. (2003). Critical history of the acculturation psychology of assimilation, separation, integration and marginalization. *Review of General Psychology*, 2003, 7(1), 3-37.
- Smith, P. B., & Schwartz, S. H. (1997). Values. In J. W. Berry, M. H. Segall., & C. Kagitcibasi (Eds). *Handbook of cross-cultural psychology, Vol. 3. social behavior and applications* (2nd). (pp.77-118). Needham Heights.
- Stonequist, E. V. (1935). The problem of the marginal man. *American Journal of Sociology*, 41, 1-12.
- Stonequist, E. V. (1937). *The marginal man: A study in personality and culture conflict*. New York: Russell & Russell.
- Schwartz, S. J., & Zamboanga, B. L. (2008). Testing Berry's model of acculturation: a confirmatory latent class approach. *Cultural Diversity and Ethnic Minority Psychology*, 14(4), 275-285.
- Shell, D. F., Newman, I. M., Fang, X. (2010). The influence of cultural orientation, alcohol expectancies and self-efficacy on adolescent drinking behavior in Beijing. *Addiction*, 105, 1608- 1615.
- Szapocznik, J., Scopetta, M. A., Kurtines, W., & Aranalde, M. D. (1978). Theory and measurement of acculturation. *Revista Interamericana de Psicologia*, 12, 113-130.
- Szapocznik, J., & Kurtines, W. (1980). Acculturation, biculturalism and adjustment among Cuban Americans. In A. M. Padilla (Ed.), *Psychological dimensions on the acculturation process: Theory, models and some new findings*. Boulder, CO: Westview Press.

- The Chinese Cultural Connection. (1987). Chinese values and the search for culture-free dimensions of culture. *Journal of Cross-Cultural Psychology*, 18, 143-164.
- Triandis, H. (1995). *Individualism and collectivism*. Boulder, CO: Westview Press.
- Tsai, J. L., Ying, Y.W., & Lee, P. A. (2000). The meaning of “being Chinese” and “being American”: variation among Chinese American young adults. *Journal of Cross-Cultural Psychology*, 31(3), 302-332.
- Wang, C., & Mallinckrodt, B. (2006). Acculturation, attachment, and psychosocial adjustment of Chinese/Taiwanese international students. *Journal of Counseling Psychology*, 53, 422–433.
- Ward, C. (1996). Acculturation. In D. Landis & R. Bhagat (Eds.), *Handbook of intercultural training* (pp. 124 –147). Thousand Oaks, CA: Sage.
- Wolfe, M. M., Yang, P. H., Wong, E. C., & Atkinson, D. R. (2001). Design and development of the European American values scale for Asian Americans. *Cultural diversity and Ethnic Minority Psychology*, 7(3), 274-283.
- Xue, J. (2002). *Western cultural influence on alcohol use among adolescents in China*. Unpublished Thesis, University of Nebraska-Lincoln, Lincoln, Nebraska.
- Xue, J. (2006). *Cultural orientation and Chinese adolescents’ drinking practices*. Unpublished Doctoral Dissertation, University of Nebraska-Lincoln, Lincoln, Nebraska
- Yang, K. S. (1995). Chinese social orientation: An integrative analysis. In T. Y. Lin, W. S. Tseng, & E. K. Yeh (Eds.), *Chinese Societies and Mental Health* (pp.19-39). NY: Oxford University Press.

- Yang, K.S. (1996). ). The psychological transformation of the Chinese people as a result of societal modernization. In Michael Harris Bond (Eds). *The handbook of Chinese psychology* (pp 479-498). Hong Kong: Oxford University Press.
- Yang, K. S. (1998). Chinese responses to modernization: A psychological analysis. *Asian Journal of Social Psychology*, 1, 75–97.

## Appendix A. Institutional Review Board Approval



June 10, 2011

Shiyuan Wang  
Department of Educational Psychology

Ian Newman  
Department of Educational Psychology  
232 TEAC, UNL, 68588-0345

IRB Number: 20110411707EP

Project ID: 11707

Project Title: Cultural Orientation and Alcohol Use among Chinese College Students

Dear Shiyuan:

The Institutional Review Board for the Protection of Human Subjects has completed its review of the Request for Change in Protocol submitted to the IRB. It has been approved for use of the reformatted version of the survey instruments.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

- \* Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- \* Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- \* Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- \* Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- \* Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This letter constitutes official notification of the approval of the protocol change. You are therefore authorized to implement this change accordingly.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,  
William Thomas, Ph.D.  
Chair for the IRB

## Appendix B. Chinese Version Questionnaire

## 大学生问卷调查

这主要是一份有关文化的问卷调查. 问题是关于您在某种情境下的反应或是您对某个现象的看法. 您的回答将会帮助我们了解对学生很重要的价值和问题.

在开始回答问题之前, 请您仔细阅读以下说明:

- 1) 这不是考试或测验, 没有所谓的答案. 您是否回答, 以及具体的答案不会影响您的成绩和在学校的表现.
- 2) 所有的问题都没有隐藏的含义. 请您根据第一反应来作答, 不必花费时间去考虑您的选择.
- 3) 请不要在问卷上填写您的名字. 您的回答将会完全保密. 您身边没有人会知道您的答案, 包括老师在内. 有关您个人背景的问题只是用于描述参与本调查的人群特征, 不会用来识别您的身份.
- 4) 填写问卷时, 请不要跟同学交谈, 也不要参考别人的答案. 如果您不明白某个问题, 请留下空白.
- 5) 请检查确认没有问题遗漏. 当您完成后, 请跟随问卷调查者的指示.

谢谢您的合作!

第一部分：以下问题请选择一个最佳答案.

1. 年龄\_\_\_\_\_

2. 性别：男 女

3. 您大学几年级？

1) 大一

2) 大二

3) 大三

4) 大四

5) 研究生

4. 您的家乡是

1) 直辖市

2) 省会城市

3) 地级市

4) 县城

5) 乡镇

第二部分：对下面的每个问题，请表明你的看法，你的看法可分为五个等级：

完全不同意      不同意      既不同意也不反对      同意      完全同意  
 1————— 2 ————— 3 ————— 4 ————— 5

表示“完全同意”某一观点，请在该条目相对的数字“5”上打圈，依次类推。  
 例如：在路上碰到我认识的长辈，我会主动向他们问好。如果你“不同意”此说法，请在数字“2”上打圈“○”。

	完全不同意	不同意	既不同意也不反对	同意	完全同意
5. 在路上碰到我认识的长辈，我会主动向他们问好	1	2	3	4	5
6. 花钱时，我会精打细算	1	2	3	4	5
7. 我认为女性不应该太强势和好胜	1	2	3	4	5
8. 我相信中国的传统艺术是世界的珍宝	1	2	3	4	5
9. 我认为西方的礼仪比东方的礼仪更适合当今社会	1	2	3	4	5
10. 我欣赏有些女性像西方人那样穿着开放，大胆显露自己身材	1	2	3	4	5
11. 我认为年纪大点的人比年轻人办事可靠	1	2	3	4	5
12. 我可能会拒绝父母给我提的建议	1	2	3	4	5
13. 我努力学习主要是为报答父母的养育之恩	1	2	3	4	5
14. 我认为妻子不应该比丈夫更能挣钱	1	2	3	4	5
15. 如果我认为老师的观点不对，我会坚持我自己的观点	1	2	3	4	5
16. 我看不惯公共场合下恋人之间搂搂抱抱	1	2	3	4	5
17. 我认为婚前同居是检验两人是否适合的一个好办法	1	2	3	4	5
18. 考虑父母的养老问题比考虑我自己的前途更重要	1	2	3	4	5
19. 我认为与其将钱存入银行，还不如拿它及时消费	1	2	3	4	5
20. 与中式餐厅相比，我更喜欢在有西式情调的西餐厅或快餐厅就餐	1	2	3	4	5
21. 我认为中国的文化博大精深，是很多西方文化所不能及的	1	2	3	4	5
22. 时髦的衣服能改善我的外在形象	1	2	3	4	5
23. 如果父母愿意，结婚后我不介意跟父母一起住	1	2	3	4	5
24. 我希望自己的行动与周围的人合拍	1	2	3	4	5
25. 我说话会尽量委婉，以顾及彼此的面子	1	2	3	4	5
26. 相比出去闯荡打拼，我更希望找到一份稳定的工作。	1	2	3	4	5
27. 即便不同意长辈的观点，我也会听他/她说完	1	2	3	4	5
28. 如果老师批评我，我会和他/她论理	1	2	3	4	5
29. 我觉得离婚没什么大不了的	1	2	3	4	5

30. 如果我的钱不够花, 我会借钱来花	1	2	3	4	5
31. 我认为在学习方面男生总的来讲要比女生好	1	2	3	4	5
32. 与中国节日相比, 我更喜欢西方的节日	1	2	3	4	5
33. 我喜欢听西方(摇滚、爵士、pop 等)音乐	1	2	3	4	5
34. 当我的想法和朋友们不同时, 为了和他们保持一致, 我会妥协	1	2	3	4	5
35. 我认为西方在许多方面应该向中国学习	1	2	3	4	5
36. 多数时候我会把不满放在心里, 尽量避免跟人起冲突	1	2	3	4	5
37. 我希望能利用父母的关系来找工作	1	2	3	4	5
38. 我认为妻子应该服从丈夫	1	2	3	4	5
39. 年长的人有很多经验, 我应该听他们的建议	1	2	3	4	5
40. 在事业的选择上, 我会听从父母的安排	1	2	3	4	5
41. 我认为在现今社会里, 男人应该主导社会	1	2	3	4	5
42. 我更欣赏西方的社会制度(教育, 政治等)	1	2	3	4	5
43. 我为自己是中国人而感到自豪	1	2	3	4	5
44. 我喜欢留比较“酷”(cool)的发型	1	2	3	4	5
45. 即使我对某方面很擅长, 我也不会表现得锋芒太露, 因为会引起别人反感	1	2	3	4	5
46. 别人称赞我, 我会觉得不好意思	1	2	3	4	5
47. 我相信教科书讲的都是对的	1	2	3	4	5
48. 如果我谈恋爱, 我会在意老师的批评	1	2	3	4	5
49. 即使将来有了很高的月收入, 我仍会高储蓄、低消费	1	2	3	4	5
50. 别人怎么做是别人的自由, 比如“非主流”, “伪娘”.	1	2	3	4	5
51. 不到万不得已, 我不会冒风险	1	2	3	4	5
52. 我喜欢追求个性化着装	1	2	3	4	5
53. 我相信中国人要比西方人勤劳和勇敢	1	2	3	4	5
54. 我会跟父母讨论有关性的问题.	1	2	3	4	5
55. 我认为一个好孩子应该也是一个听大人话的孩子	1	2	3	4	5
56. 有长辈在场时, 我会等他们坐下后, 我再坐下	1	2	3	4	5
57. 我一般比较听老师的话	1	2	3	4	5
58. 即使将来有很好的工作, 我也不会借钱消费	1	2	3	4	5

59. 我希望我能像国外的孩子那样独立生活.	1	2	3	4	5
60. 我认为一个人做事不先考虑家人是自私的	1	2	3	4	5
61. 在个人利益和集体利益发生冲突时,我可能会牺牲个人利益	1	2	3	4	5
62. 染发会使我看上去更有神采	1	2	3	4	5
63. 鉴于中国在现今世界中的地位,我对中国感到自豪	1	2	3	4	5
64. 我会坚持我自己的想法,即便父母反对	1	2	3	4	5
65. 我很难接受超前消费(今天花明天的钱)的观念	1	2	3	4	5
66. 我认为只要彼此相爱,婚前发生性行为也没关系	1	2	3	4	5
67. 我认为传统节日就应该跟家人一起过	1	2	3	4	5
68. 在个人的婚姻问题上,我会考虑父母的意见	1	2	3	4	5
69. 我觉得一个好的家庭模式应是“男主外,女主内”	1	2	3	4	5
70. 当与父母同辈的人谈话时,我会用“你或你们”相称	1	2	3	4	5
71. 我把集体利益放在个人利益的前面	1	2	3	4	5
72. 与长辈一起吃饭时,我会注意座位的顺序	1	2	3	4	5
73. 我不应该怀疑老师的权威	1	2	3	4	5
74. 我欣赏西方人直接,目的明确的做事方式	1	2	3	4	5
75. 我会省吃俭用地去存钱	1	2	3	4	5
76. 我喜欢一些明星的衣着打扮	1	2	3	4	5
77. 我为中国的悠久历史感到骄傲	1	2	3	4	5
78. 我觉得节假日或其他重要日子给上级或同事/同学送祝福是很必要的	1	2	3	4	5
79. 我认为在家庭中男性的地位应该高于女性	1	2	3	4	5
80. 我认为上大学前不应该谈恋爱	1	2	3	4	5
81. 作为子女,我应该做父母喜欢我做的事情	1	2	3	4	5
82. 对一件事不确定时我不会轻易去尝试	1	2	3	4	5
83. 我希望我的观点能与朋友的观点保持一致	1	2	3	4	5
84. 穿名牌服装使我显得更有吸引力	1	2	3	4	5
	完全 不同意	不同 意	既不 同意 也不 反对	同意	完全 同意

85. 我欣赏中国文化中的集体主义观念	1	2	3	4	5
86. 我欣赏西方父母与子女之间平等的关系	1	2	3	4	5
87. 如果没有自己房子, 我不会结婚	1	2	3	4	5
88. 只要承受得起, 我认为高消费也挺好	1	2	3	4	5
89. 只要我愿意, 什么时候谈恋爱都无所谓	1	2	3	4	5
90. 当长辈需要帮助时, 我会主动帮助他们	1	2	3	4	5
91. 认识的同龄人如果混得比我好, 我会觉得很没面子.	1	2	3	4	5
92. 我认为总体来讲, 男性比女性聪明	1	2	3	4	5
93. 我做事不大参考朋友或同学的意见	1	2	3	4	5
94. 与中国节日相比, 我更愿意过西方的节日	1	2	3	4	5
95. 我认为抽烟的女性不太正经	1	2	3	4	5
96. 我很少跟家人聊我自己的想法和生活	1	2	3	4	5
97. 我愿意去西方国家生活	1	2	3	4	5
98. 作为年轻人, 我们应该把年长者放在比我们高的地位上去看待他们	1	2	3	4	5
99. 父母要我做什么, 我就会做什么	1	2	3	4	5
100. 我觉得谈恋爱会使我的学习成绩下降	1	2	3	4	5
101. 我相信女性和男性一样, 能胜任重要职务	1	2	3	4	5
102. 我欣赏西方文化所崇尚的自由自在、释放自我的生活方式	1	2	3	4	5
103. 我喜欢日韩流行文化, 比如漫画, 或是韩剧, 韩星等	1	2	3	4	5
104. 我不会反对集体做出的决定, 即使我认为它不正确	1	2	3	4	5
105. 在别人面前, 我会尽量隐藏自己的情绪	1	2	3	4	5
106. 我羡慕在西方国家学习和工作的中国人	1	2	3	4	5
107. 我认为女性可以像男性一样追求事业的成功	1	2	3	4	5
108. 买东西的时候我会倾向选择外国品牌, 比如衣服手机等	1	2	3	4	5
109. 我认为人际关系比个人能力更重要	1	2	3	4	5
110. 只要过得开心, 我不在乎别人怎么看我	1	2	3	4	5
111. 我认为如果经济条件允许, 女性应该待在家里做家庭主妇以便照顾家庭	1	2	3	4	5
112. 达不到父母的期望会让我感到不安	1	2	3	4	5

113. 我不会很直接地表达我对父母的感情, 比如拥抱, 或者说“我爱你”.	1	2	3	4	5
114. 如果工作稳定, 跟同事相处很好, 我不会单纯为了更高的工资而跳槽	1	2	3	4	5
115. 我认为女性不应该表现得太聪明	1	2	3	4	5
116. 我喜欢去酒吧	1	2	3	4	5
117. 我认为学生不应该太注重外表打扮	1	2	3	4	5
118. 我认为结婚摆酒要办得风风光光, 这样会很有面子	1	2	3	4	5
119. 我认为女性的贞洁很重要.	1	2	3	4	5
120. 在正式场合, 我一般不会表达与多数人想法不同的意见	1	2	3	4	5

**第三部分: 这部分问卷是有关饮酒的问题. 这里的“酒”包括啤酒, 白酒, 葡萄酒, 果酒, 米酒, 奶酒, 以及任何含酒精的饮料. 每个问题请选择一个最佳答案.**

121. 在过去的一年内, 你大概有多少天喝过酒?

- 1) 从不喝酒
- 2) 过去一年内没喝过酒
- 3) 过去一年内喝过酒, 但近一个月没喝过
- 4) 过去一个月喝过酒

122. 在过去的30天内, 你大概有多少天喝过酒?

- 1) 我从不喝酒
- 2) 在过去30天内, 我没喝过酒
- 3) 1-3天
- 4) 4-9天
- 5) 10-20天
- 6) 至少20天到几乎每天

123. 想一下你班上的男同学, 你认为一个月他们有多少天喝过酒?

- 1) 从不喝酒
- 2) 不会每个月都喝
- 3) 1-3天
- 4) 4-9天
- 5) 10-20天

6) 20天或更多

124. 想一下你班上的女同学, 你认为一个月他们有多少天喝过酒?

- 1) 从不喝酒
- 2) 不会每个月都喝
- 3) 1-3天
- 4) 4-9天
- 5) 10-20天
- 6) 20天或更多

125. 想一下你班上的男同学, 你认为一年他们有多少天喝过酒?

- 1) 从不喝酒
- 2) 过去一年内没喝过酒
- 3) 过去一年内喝过酒, 但近一个月没喝过
- 4) 过去一个月喝过酒

126. 想一下你班上的女同学, 你认为一年他们有多少天喝过酒?

- 1) 从不喝酒
- 2) 过去一年内没喝过酒
- 3) 过去一年内喝过酒, 但近一个月没喝过
- 4) 过去一个月喝过酒

(调查结束, 谢谢!)

## Appendix C. English Version Questionnaire

### Cultural Issues Questionnaire [English translation from Mandarin]

This survey is about cultural issues. The questions ask you how you will respond in certain situations. The information you provide will be used to help us understand values that are important to students. The survey will take less than 25 minutes to complete. Your help is greatly appreciated.

Before you begin, please read the following instructions carefully:

- 1) This is not an exam or a test. There are no right or wrong answers. How and whether you answer all the questions will not affect your grade in this class or your standing in the university.
- 2) There are no hidden meanings in these statements. Please your belief according to your first thought. Do not waste time considering your options.
- 3) **DO NOT** write your name on this survey. The answers you give will be kept private. No one including your teachers will know what you have written. The questions that ask about your background will be used only to describe the types of students completing this survey. The information will not be used to identify you.
- 4) No talking is allowed when completing the questionnaire. Please do not look at others people's answers.
- 5) Make sure you read and try to understand every question. When you are finished, follow the administrator's instructions.
- 6) You may omit any questions that you choose not to answer.
- 7) If you don't understand the meaning of a question, leave it blank.

Thank you so much for your participation!

**Part 1. These questions are about you. Please choose the one answer for each question that best describes you.**

1. Age \_\_\_\_\_
2. Gender: Male    Female
3. Grade: Freshmen    Sophomore    Junior    Senior    Graduate
4. Where is your hometown?
  - (1) State-ruled city
  - (2) Province capital
  - (3) District city
  - (4) County city
  - (5) Town or rural area

**Part 2. Indicate how strongly you agree or disagree with each statement that describes aspects of culture by circling a number on a 5-point scale like this:**

Strongly Disagree    Disagree    Neither    Agree    Strongly Agree  
 1————— 2————— 3————— 4————— 5

**Please circle one number for each statement that best reflects your belief.**

5. I will greet to elders first whom I know when I bump into them
6. I count every cent when buying something
7. I think women shouldn't be too capable and competitive.
8. I believe that Chinese traditional arts are treasures of the world
9. I think western etiquette is more appropriate than eastern one for today's society
10. I think it is good that women dress to show their body like westerners.
11. I think Elders are more reliable than young people.
12. I would refuse parent's suggestions
13. The reason I study so hard is to show my thanks for my parent raising me
14. In a family, wife shouldn't be more capable than husband.
15. I will insist on mine if I think teacher's opinions are wrong
16. I feel uncomfortable to see couples hugging and kissing in public
17. I think living together before marriage is a good way to test whether they match each other
18. My future is less important than supporting my parents
19. I rather buy something that makes me happy than deposit money in banks
20. I prefer western style restaurants to Chinese restaurants
21. With respect to the breadth and depth of Chinese culture, western culture cannot

- compare with it.
22. Fashionable clothing improves my personal image.
  23. If my parents like, I'm willing to live with my parents even after I get married.
  24. I don't want to act different from others.
  25. I will try to use euphemism to keep each other's face.
  26. I prefer a stable job, like a government job to start my own business or work for private industry.
  27. I will listen until seniors finish his/her talking even though I disagree
  28. If my teacher criticizes me, I will argue with him/her
  29. I do not think divorce is a big deal.
  30. I would borrow money if I did not have money enough to buy something.
  31. I think that boys are better than girls in academic performance
  32. Compared with Chinese holidays, I appreciate western holidays more
  33. I enjoy western music (Rock, Jazz, Pop, etc.)
  34. When my opinions conflict with my friends', I would be more likely to go with them
  35. I believe that the west should learn many things from China
  36. Most time I will keep my discontent in mind to avoid conflict with others.
  37. I wish parent's social connection can help me find a good job
  38. I think wife should obey husband.
  39. I think seniors have a lot of experiences so I should listen to their advices.
  40. I will comply with the arrangement made by my parent for my future
  41. I think male should play a leading role in my society
  42. I more appreciate western social system (education, political, and so on).
  43. I am proud of being a Chinese
  44. I like having a cool hairstyle.
  45. I don't show off even I'm excellent, because it will cause other people's despise.
  46. I feel shy when someone compliments me.
  47. I trust the approaches (viewpoints) from textbooks
  48. I will care the comments from my teachers if I date someone
  49. Even if I have a high salary, I will still save more and spend less
  50. What others do is their own business.
  51. I won't take the risk to do something unless I have to.
  52. I enjoy wearing the way I like.
  53. I believe that Chinese are more industrious and brave than westerners
  54. I discuss things related to sex with my parents.
  55. I think a good child is supposed to comply with their parents' teaching
  56. I will sit down after elders have a seat
  57. I comply with what my teachers say
  58. I will not live on loan like westerners do; even I have decent job in the future
  59. I hope I can live independently just as young foreigners do
  60. I think it's selfish not to consider family before make decisions.
  61. When individual interests and group interests conflict with each other, I would give up my individual ones
  62. Getting my hair dyed makes me look better.
  63. Due to China's status in the world today, I am proud of China

64. I will stick to my idea even if my parents oppose it
65. I can't accept the concept of unplanned consumption (spending in advance)
66. I do not care to have sex before marriage as long as we love each other.
67. I think traditional festivals should be the days spend with family.
68. I will take my parent's suggestions on my marriage
69. I think that a good family should be men take care of out-family business and women take care of in-family business
70. I will use "you" when talking to people of my parent generation
71. I give priority to group interests other than individual ones
72. I would be cautious with the order of seats when having a dinner with elders
73. I should not doubt teacher's authority
74. I more appreciate the Western way of doing thing, which is straightforward and directed by goals, compared to Chinese way.
75. I will save money in the way that even save on my food and other basic expenses
76. I like to imitate the dress style of some stars
77. I am proud of Chinese long history
78. I think it's necessary to send regards to superiors, colleagues or schoolmates.
79. I think that men should have higher status than women in families
80. I think students shouldn't date before college.
81. As a child, I should do what our parents want me to do
82. I won't give a try unless I'm sure what I do can succeed.
83. I hope I am unanimous with others in my group in most of cases
84. I think I would be more attractive in brand clothes.
85. I appreciate the value of "collectivism" Chinese culture has
86. I appreciate the equal relationship between parents and their children in western culture
87. I won't get married if I don't have my own house.
88. I think high spending is OK as long as I can afford it
89. As long as I am happy, I wouldn't care when I am going to date
90. I would like to help seniors when they need help
91. If my peers are more successful than me, I will feel face loss.
92. I believe that generally males are more intelligent than females
93. When I wouldn't take suggestions or comments from my friends or classmates
94. I prefer to celebrate western holidays than Chinese holidays
95. I think girls who smoke are bad girls.
96. I seldom talk about my thoughts and life with my parents.
97. I would like to living in western countries
98. I think I should treat elders with higher status.
99. I will do what my parents want me to do
100. I think dating will affect my school performance
101. I believe women are equally capable of fulfilling important positions just like men.
102. I appreciate the context of western culture that emphasizes on freedom and taking ease life.
103. I like Japanese or Korean pop culture.
104. I wouldn't object the decisions made by group even though I do not think it is

- right
105. I don't like showing my emotion in front of others
  106. I admire those Chinese studying and working in western countries
  107. I think that women can pursue a successful career like men
  108. I prefer foreign brands when I do shopping.
  109. I believe social connection is more important than individual abilities.
  110. As long as I'm happy, I don't care what other people think about me.
  111. I think if family's financial condition is good, women should stay home as housewives to take care of family.
  112. I will be concerned if I can't achieve what my parent expected
  113. I do not show my love to my parents in a straightforward way, like hug/kiss or saying "I love you".
  114. If I have a stable job and good relationship with colleagues, I won't change my work just for higher salary.
  115. I think women should not act too smart.
  116. I like going to bar.
  117. I think students should not pay too much attention to appearance.
  118. I will have "face" when I get married with a grand and fancy wedding.
  119. I think women's chastity is very serious issue.
  120. In formal occasions, I do not express my own opinions different from the majority.

**Part 3: This part of the questionnaire asks about alcohol use. In this questionnaire "alcohol" refers to beer, liquor, wine, fruit wine, rice wine, horse milk wine, or any other beverage that contains alcohol. For this part, choose the one answer to each question that best describes you or your class.**

121. On how many days did you drink alcohol in the past 12 months from today?
  - (1) I never drank alcohol
  - (2) I did not drink any alcohol in the past 12 months
  - (3) I drank alcohol on 1 to 5 days in the past 12 months
  - (4) I drank alcohol on at least 1 day every two months up to 1 day every month in the past 12 months
  - (5) I drank alcohol on at least 2 days each month up to 1 day each week in the past 12 months
  - (6) I drank alcohol on 2-3 days each week in the past 12 months
  - (7) I drank alcohol on 4 or more days each week in the past 12 months
  
122. On how many day did you drink alcohol during the past 30 days from today?
  - (1) I never drank alcohol
  - (2) I did not drink alcohol in the past 30 days
  - (3) I drank alcohol on 1 to 3 days of the past 30 days
  - (4) I drank alcohol on 4 to 9 days of the past 30 days
  - (5) I drank alcohol on 10 to 20 days of the past 30 days

(6) I drank alcohol on at least 20 days up to almost every day of the past 30 days

123. Think about the male students at your university who are in the same class as you.

On how many days during a typical **month** do you think they drink?

- (1) The male students in my university class never drink alcohol
- (2) The male students in my university class do not drink in a typical month
- (3) The male students in my university class drink alcohol on 1 to 3 days of a typical month
- (4) The male students in my university class drink alcohol on 4 to 9 days of a typical month
- (5) The male students in my university class drink alcohol on 10 to 20 days of a typical month
- (6) The male students in my university class drink alcohol on at least 20 days or more in a typical month

124. Think about the female students at your university who are in the same class as you.

On how many days during a typical **month** do you think they drink?

- (1) The female students in my university class never drink alcohol
- (2) The female students in my university class do not drink in a typical month
- (3) The female students in my university class drink alcohol on 1 to 3 days of a typical month
- (4) The female students in my university class drink alcohol on 4 to 9 days of a typical month
- (5) The female students in my university class drink alcohol on 10 to 20 days of a typical month
- (6) The female students in my university class drink alcohol on at least 20 days or more in a typical month

125. Think about the male students at your university who are in the same class as you.

On how many days during a typical **year** do you think they drink?

- (1) The male students in my university class never drink alcohol
- (2) The male students in my university class do not drink alcohol in a typical year
- (3) The male students in my university class drink alcohol on 1 to 5 days in a typical year
- (4) The male students in my university class drink alcohol on at least 1 day every two months up to 1 day each month in a typical year
- (5) The male students in my university class alcohol drink alcohol on at least 2 days each month up to 1 day each week in a typical year
- (6) The male students in my university class drink alcohol on 2-3 days each week of a typical year
- (7) The male students in my university class drink alcohol on 4 or more days of each week in a typical year

126. Think about the female students at your university who are in the same class as you.

On how many days during a typical **year** do you think they drink?

- (1) The female students in my university class never drink alcohol
- (2) The female students in my university class do not drink alcohol in a typical year
- (3) The female students in my university class drink alcohol on 1 to 5 days in a typical year
- (4) The female students in my university class drink alcohol on at least 1 day every two months up to 1 day each month in a typical year
- (5) The female students in my university class alcohol drink alcohol on at least 2 days each month up to 1 day each week in a typical year
- (6) The female students in my university class drink alcohol on 2-3 days each week of a typical year
- (7) The female students in my university class drink alcohol on 4 or more days of each week in a typical year

(The questionnaire ends here. Thank you!)

## Appendix D. Cultural Orientation Factors

### Factor 1. Gender discrimination

- 41. 我认为在现今社会里，男人应该主导社会
- 38. 我认为妻子应该服从丈夫
- 69. 我觉得一个好的家庭模式应是“男主外，女主内”
- 92. 我认为总体来讲，男性比女性聪明
- 7. 我认为女性不应该太强势和好胜
- 31. 我认为在学习方面男生总的来讲要比女生好
- 14. 我认为妻子不应该比丈夫更能挣钱
- 79. 我认为在家庭中男性的地位应该高于女性
- 111. 我认为如果经济条件允许，女性应该待在家里做家庭主妇以便照顾家庭
- 115. 我认为女性不应该表现得太聪明

- 41. I think male should play a leading role in my society
- 38. I think that wives should obey husband
- 69. I think that a good family should be men take care of out-family business and women take care of in-family business
- 92. I believe that males are more intelligent than females, generally
- 7. I think women shouldn't be too competitive
- 31. I think that boys are better than girls in academic achievements
- 14. I think wife shouldn't make more money than husband
- 79. I agree that men should have higher status than women in families
- 111. I think if husband can make enough money to support the family, wife should stay home as housewife
- 115. I think women shouldn't act too smart

### Factor 2. Chinese pride

- 21. 我认为中国的文化博大精深，是很多西方文化所不能及的
- 35. 我认为西方在许多方面应该向中国学习

- 77. 我为中国的悠久历史感到骄傲
- 43. 我为自己是中国人而感到自豪
- 8. 我相信中国的传统艺术是世界的珍宝
- 53. 我相信中国人要比西方人勤劳和勇敢
- 63. 鉴于中国在现今世界中的地位，我对中国感到自豪

21. I think that the broad and depth of Chinese culture are that western culture is unable to compete (compare) with

35. I believe that the west should learn many things from China

77. I am proud of Chinese long history

43. I am proud of being a Chinese

8. I believe that Chinese traditional arts are treasures of the world

53. I believe that Chinese are more industrious and brave than westerners

63. Due to China's status in the world today, I am not proud of China

### **Factor 3. Appearance**

44. 我喜欢留比较“酷”(cool)的发型

52. 我喜欢追求个性化着装

33. 我喜欢听西方(摇滚、爵士、pop等)音乐

62. 染发会使我看上去更有神采

76. 我喜欢一些明星的衣着打扮

22. 时髦的衣服能改善我的外在形象

116. 我喜欢去酒吧

84. 穿名牌服装使我显得更有吸引力

108. 买东西的时候我会倾向选择外国品牌，比如衣服手机等

44. I like having a cool hairstyle

52. I enjoy wearing the way I like

33. I enjoy western music (Rock, Jazz, Pop, etc.)

62. I like to get my hair dyed just as westerners' hair

- 76. I like to imitate the dress style of some stars
- 22. Fashionable clothing can improve my image
- 116. I like going to bar
- 84. I think I would be more attractive in brand clothes
- 108. I prefer foreign brands when I buy clothes or cell phones, etc

#### **Factor 4. Being interested in western culture**

- 102. 我欣赏西方文化所崇尚的自由自在、释放自我的生活方式
- 97. 我愿意去西方国家生活
- 42. 我更欣赏西方的社会制度（教育，政治等）
- 74. 我欣赏西方人直接, 目的明确的做事方式
- 86. 我欣赏西方父母与子女之间平等的关系
- 106. 我羡慕在西方国家学习和工作的中国人
- 20. 与中式餐厅相比, 我更喜欢在有西式情调的西餐厅或快餐厅就餐
- 32. 与中国节日相比, 我更喜欢西方的节日

- 102. I appreciate the context of western culture that emphasizes on freedom and taking ease life
- 97. I would like to living in western countries
- 42.I appreciate western social system more
- 74.I appreciate the western way of doing things with straightforward and definitive goals
- 86. I appreciate the equal relationship between parents and their children in western
- 106. I admire those Chinese studying and working in western countries
- 101. I believe women are equally capable of fulfilling important positions just like men
- 107. I think that women can pursue a successful career like men
- 20. I prefer western restaurants or fast food restaurants with western atmosphere to Chinese restaurants
- 32. Compared with Chinese holidays, I appreciate western holidays more

### **Factor 5.Filial piety**

- 81. 作为子女，我应该做父母喜欢我做的事情
- 99. 父母要我做什么，我就会做什么
- 40. 在事业的选择上，我会听从父母的安排
- 55. 我认为一个好孩子应该也是一个听大人话的孩子
- 13. 我努力学习主要是为报答父母的养育之恩

- 81. As a child, I should do what my parents want me to do
- 99. I would do what my parent wants me to do
- 40. I would comply with the arrangement made by my parent for my future
- 55. I think a good child is supposed to comply with their parents' teaching
- 13. The reason I study so hard is to show my thanks for my parent raising me

### **Factor 6. The Doctrine of Mean**

- 120. 在正式场合，我一般不会表达与多数人想法不同的意见
- 45. 即使我对某方面很擅长，我也不会表现得锋芒太露，因为会引起别人反感
- 36. 多数时候我会把不满放在心里，尽量避免跟人起冲突
- 105. 在别人面前，我会尽量隐藏自己的情绪
- 51. 不到万不得已，我不会冒风险
- 46. 别人称赞我，我会觉得不好意思
- 82. 对一件事不确定时我不会轻易去尝试

- 120.In formal occasions, I won't say opinions different from others'
- 45.I won't show off my strengths to avoid other's repulsion
- 36. Most time I will keep my mouth shut to avoid conflict with others
- 105.I will hide my emotion before other people
- 51.I won't take risk unless I have to
- 46.I will feel shy when hear other's compliment
- 82.I won't make action unless I know I can succeed

### **Factor 7. Consumerism**

- 19. 我认为与其将钱存入银行，还不如拿它及时消费
- 30. 如果我的钱不够花，我会借钱来花
- 88. 只要承受得起，我认为高消费也挺好

- 19. I rather buy something that makes me happy than deposit money in banks
- 30. I would borrow money if I did not have money enough to buy something
- 88. I think high spending is OK as long as you can afford

### **Factor 8. Respect Elders**

- 56. 有长辈在场时，我会等他们坐下后，我再坐下
- 5. 在路上碰到我认识的长辈，我会主动向他们问好
- 72. 与长辈一起吃饭时，我会注意座位的顺序
- 27. 即便不同意长辈的观点，我也会听他/她说完
- 90. 当长辈需要帮助时，我会主动帮助他们
- 98. 作为年轻人，我们应该把年长者放在比我们高的地位上去看待他们

- 56. I would sit down soon after elders have a seat
- 5. I like to greet to elders at first whom I know when I bump into them
- 72. I would be cautious with the order of seats when having a dinner with elders
- 27. I will listen until seniors finish his/her talking even though I disagree
- 90. I would like to help seniors voluntarily when they need help
- 98. I think I should give elders higher status.

### **Factor 9 . Collectivism**

- 71. 我把集体利益放在个人利益的前面
- 61. 在个人利益和集体利益发生冲突时，我可能会牺牲个人利益
- 85. 我欣赏中国文化中的集体主义观念

24. 我希望自己的行动与周围的人合拍
83. 我希望我的观点能与朋友的观点保持一致
25. 我说话会尽量委婉，以顾及彼此的面子
60. 我认为一个人做事不先考虑家人是自私的
71. I give priority to group interests other than individual ones
61. When individual interests and group interests conflict with each other, I would give up my individual ones
85. I appreciate the value “collectivism” Chinese culture has
24. I hope my behaviors don't deviate from others'.
83. I hope I am unanimous with others in my group in most of cases
25. I will try not to use harsh words to save each other's face.
60. I think it's selfish for someone who doesn't consider family first before making big decisions.

#### **Factor 10. Attitude toward dating**

66. 我认为只要彼此相爱，婚前发生性行为也没关系
17. 我认为婚前同居是检验两人是否适合的一个好办法
80. 我认为上大学前不应该谈恋爱
89. 只要我愿意，什么时候谈恋爱都无所谓
16. 我看不惯公共场合下恋人之间搂搂抱抱
66. I do not care to have sex before marriage as long as we love each other
17. I think living together before marriage is a good way to test whether they match each other
80. I think students shouldn't date until college
89. As long as I am happy, I wouldn't care when I am going to date
16. I feel uncomfortable to see couples hugging in public