

A STUDY OF SCALE CONSTRUCTION FOR THE MEASUREMENT OF
TRADITIONALITY AND MODERNITY IN THE ASIAN AMERICAN/ PACIFIC
ISLANDER POPULATION

by

PEARL SHIH CHANG

(Under the Direction of Brian Glaser)

ABSTRACT

A scale for Asian Americans/ Pacific Islanders (AAPI) has not been discovered although numerous attempts have been made to create a quantitative measure for traditionality and modernity (T-M). This project includes the conceptualization and subsequent development of items and a scale measuring T-M. The scale, named AAPIVS (Asian American/ Pacific Islander Values Scale), consisted of 46 items and was given to 394 AAPI participants. The AAPIVS consisted of five factors including, Familialism, Gender Beliefs, Spirituality/ Religiosity, Cultural Maintenance and Emotional Regulation. An exploratory factor analysis (EFA) was conducted on the responses, which revealed a 27 item structure. The results revealed five factors, which were Familial Preferences, Gender Beliefs, Traditionality, Spirituality/ Religiosity and Image Retention. Results indicated that traditionality may be conceptually related to modernity in a different manner than in previous research. Implications and future directions in T-M research are discussed.

INDEX WORDS: Modernity, Traditionality, Scale Construction, Asian American/ Pacific Islanders, Values Scale

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DEDICATIONS

This was finished in dedication to Chau-Ming Chang, who was born on Mid-Autumn Festival Day in 1928 using the Chinese lunar calendar and died on March 30, 2012 according to the Gregorian calendar.

This dissertation is also dedicated to my supervisors and mentors of my pre-doctoral internship program at UNC-Chapel Hill, who helped me realize my potential and gave me renewed faith and confidence.

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CHAPTER 1

INTRODUCTION

Value systems across the world may hold a set of commonalities. These universal values are prioritized differently within each society, thus contributing to the uniqueness of each culture (Chang, Wong & Koh, 2003) . Within the past few decades, two proposed set of values, traditionality and modernity (T-M), have been found across many different societies ranging from South American societies (Kahl, 1968), to African (Doob, 1967) and Asian populations (Yang, 2003) and have been proposed to be essential to Asian cultural values systems (Leong & Chang, 2003).

A particular interest in the psychology of the Asians has spiked in recent decades in T-M research. Leong and Chang (2003) believe that “modernity possess considerable explanatory power as a psychological variable and is worthy of continued theoretical and empirical exploration” and is necessary to understand the functioning and adjustment of Asians (p.1- 2). Yang (2003b) agrees that these constructs affect and influence the everyday lives of Asians in various manners. Hwang (2003b) emphasizes that without understanding T-M, one is unable to fully acknowledge and explain the psychology of the Asian population.

Research regarding T-M has been inconsistent, despite the changing demographics and strong claims that T-M may be an essential component to comprehensively understand Asian value systems. American researchers originally began researching T-M after World War II in the 1950's (Bendix, 1967; Zhang, Zheng & Wang, 2003). Research began to decline in the late

1960's, although explanations and theories to the near absence of T-M research between the 1970's until the late 1980's differ (Hwang, 2003a; Yang, 2003).

A nearly 20 year gap exists between when the majority of western researchers stopped T-M research and when eastern researchers began to study these constructs (Hwang, 2003a; Yang, 2003). Dr. Kuo-Shu Yang was the first Asian psychologist to begin studying T-M in the late 1980's (Hwang, 2003a; Yang, 1981). Yang (2003) noted the challenges of picking up research from a different era and from a different professional viewpoint. He noted that previous research reflected the societal view of T-M, or modernism of society, rather than at an individual psychological level. Bridging the gap between measuring constructs at a societal level versus the individual level has been reflected in the measurement inconsistencies of T-M and will be discussed in latter sections. Leong and Chang (2003) best summarizes the progress of T-M research to date with, "while the concept of traditionality/modernity has been controversial in psychological circles, there is little disagreement that the process of modernization has been a central theme in the development of Asian countries during the last few decades" (p. 1).

For this project, traditionality is defined as the perseverance of beliefs, attitudes and values reminiscent of one's ancestral culture at the individual level and modernity is defined as the cultural adaptation and incorporation of diverse beliefs, attitudes and values at the individual level in order to accommodate an evolving society.

Purpose of the Study

The bulk of T-M research began shortly after World War II (Armer & Schaiberg, 1972). During this American period of turmoil, other popularly studied constructs such as cynicism, alienation, and distrust were mistakenly assumed to be similar to traditionality. Prominent measurement tools such as Inkeles' Overall Modernity Scale (1966), Kahl's Modernity I and II

scales (1968), Doob's unnamed modernity scale (1967) and Schnaiberg's Modernity scale (1970) were scales constructed with the aforementioned constructs in mind, thus misconceptualizing traditionality as the more inferior of the two constructs and modernity as representing western and a more superior civilization.

Researchers documented the T-M research process to be evasive and circular, resulting in researchers to doubt the importance and sometimes, existence (Levy, 1966; Schnaiberg, 1970). For instance, the difficulty and frustration from creating consistent conceptualizations of T-M could best be summarized by Levy (1966) when he explained the two constructs "must mean something other than its explicit definition here, [you] should feel free to substitute any other term or symbol provided he does so consistently" (p.11). Schnaiberg (1970) agreed that the conceptualization issue is difficult but also noted that the rigors used to construct the assessment scales to measure the two constructs were often simple or irreverent. Due to various criticism of the literature, research interest quickly diminished in T-M, leaving Dr. Alex Inkeles to continue as the main American researcher past the 1970's.

The difficult conceptualization process extended to the scale construction process. Armer and Schnaiberg's (1972) critique of popularly administered T-M instruments noted that the items on the T-M scales were "intended to measure the same or very similar phenomena, [but] they reveal prima facie differences in content" (p. 302). The researchers further stated "the notion that social science has been able to develop a universally valid measure of modernity appears to be false" (p. 315). Schnaiberg's (1970) frustration is best illustrated when he concluded that most prominent T-M scales seemed to fail in representing T-M properly with

"there has been a concomitant increase in the study of modernization. Perhaps the term 'study' is overly generous; there has been a plethora of speculation concerning

modernization, with an appalling lack of either conceptual clarity or empirical grounding” (p. 399).

T-M research was later continued by eastern researchers but they encountered similar difficulties. Leong and Chang (2003) echoed similar sentiments as previous researchers noting the “murkiness” of current T-M definitions and declared a great need to continue exploring these constructs.

Part of the “murkiness” of scale construction may be the result of generalizability concerns of previous T-M scales. T-M scales have largely been developed and tested with consideration of using them in third world countries (Armer & Schnaiberg, 1972). Past research focused mostly on third world countries and oversampled people living in urban areas, thus ignoring a large percentage of the population from research. Arguably, dynamic concepts such as T-M, are possibly some of the few constructs whose definition change more rapidly than the research produced. Hence, conceptualizations and scale development intended for third world countries may not provide a meaningful measure in first and second world countries (Armer & Schnaiberg, 1972).

In addition to the need of better identifying and conceptualizing modernity, further quantitative research is required (Zhang et al, 2003). Currently there is more qualitative than quantitative research in general on T-M. Yang (2003) agreed that more emphasis should be placed on creating assessments to better quantify T-M. Unfortunately, quantitative research in existence has not been rigorous (Schnaiberg, 1970). For instance when Schnaiberg reviewed the quantitative T-M research, he noted “in some of the prior American studies, the apparent neatness of fit between the theoretical discussion... and the empirical results... is somewhat artificial” (p. 420). Armer and Schnaiberg (1972) further criticized western T-M scales and

called them poorly constructed due to the lack of strenuous statistical analysis available at the time. Additionally, the scales constructed surprisingly contained very few questions. Gough's (1976) scale contained eight items, whereas Stephenson's (1968) scale had six item scales. The scant amount of items on T-M scales led to some skepticism surrounding the scale development of T-M.

Prior to the late 1980's, research involving T-M was more reflective of the societal level than individual level (Zhang et al., 2003). Western researchers that studied T-M in the 1950's through 1970's were sociologists that focused on the societal levels of T-M. Hence, the T-M scales developed nearly 40 years ago by western researchers may not accurately reflect the constructs at the individual level nor precisely represent the two constructs. Research has shown that reliance on existing measurement tools that may not represent the construct in appropriate manners will likely lead to errors (DeVellis, 2003).

Currently, the vast majority of T-M studies are from overseas in Asia, with very little literature found representing Asian American/ Pacific Islanders (AAPI) residing in the United States. On closer examination of the literature, T-M data are usually gathered as a component of larger studies, thereby signaling the need for more grand scale research designs. Additionally, no known scales have been created to measure T-M specifically in the AAPI population. Rather, the current empirically validated research scales have been conducted on the Asian population, leaving out those who identify with more than one culture.

Much of the recent T-M research has relied on college student samples from Asian countries, which has also severely limited the ability to generalize results and scales to different populations (Lu & Kuo, 2002; Zhang et al., 2003). However, it should be noted that Yang's (2007) *Multiple Factors Assessment on Modernity* and *Multiple Factors Assessment on*

Traditionality scales included both a scale intended for college as well as adult population, although a specific age range was not included in the translated scale. As a result, most scales developed in the past as well as current scales in usage are not generalizable to various populations, especially those residing in western civilizations such as the U.S.

According to DeVellis (2003), vocabulary items on scales should not be beyond a 5th grade reading level. Yang's vocabulary on his scales can be construed as beyond the average reading level of everyday people. Whether this is due to translation difficulties when items were translated from Mandarin Chinese into English is unknown. However, more scales are needed to further the applicability of T-M research. This research aims to further add to the scale development process and understanding of T-M as related to the AAPI population.

The availability of research in certain AAPI groups is also minimal. Although AAPI scholars have long called for the recognition of the immense cultural diversity within the AAPI group, much of the counseling and psychological literature with AAPI population tends to be based on individuals of East Asian descent (e.g., Chinese, Japanese and Korean) (David & Okazaki, 2006). Asian American societies, such as the Philippines and Hawaii, are often neglected due to their history of Western colonization, which has omitted them from Eastern psychological studies on T-M. If the concepts of T-M remain enclosed within Asian borders, Western psychology may forego an essential variable for evaluating Eastern mentality, which will contribute to an already growing schism between Eastern and Western psychology.

The need for a better conceptualization and method of measuring T-M is indicated in the empirical literature. Therefore, this study has three different purposes, which includes:

- 1.) To establish a conceptualization of T-M, which integrates both western and eastern empirical research.

- 2.) To establish a scale that addresses the current controversies concerning T-M scale development.
- 3.) To create a scale that is generalizable to the Asian American/ Pacific Islander adults.

Significance of the Study

Although empirically supported research may have personal components associated with it, the ability to keep reactions and biases apart from research is important to maintain the rigors and integrity of the research being conducted. When too much bias and personalization enter research, there is a danger that the research becomes skewed. A limitation in the current research on T-M is the personal bias depicted in the works. Within T-M research, many journal articles include biased wording in their writings. For instance, Zhang et al. (2003) referred to rural areas as “backward in economy and education...” (p. 71). When discussing gender differences in attitudes towards traditionality, the authors continue with “Modern adolescents are greatly disgusted with traditional culture and personality, especially females...” (p. 72).

The gap in T-M research also reflects the schism in T-M thought and emotional laden language found in the research process, which emphasizes the importance of impartial T-M research. Eastern researchers have passed off much of the older T-M research as “hegemonically domineering” and insensitive to eastern needs (Hwang, 2003a; Yang, 2006, p. 2009). These strong reactions have also generated different concerns on whether or not eastern researcher’s own biases have skewed the research process as well as the generalizability of T-M to different populations.

As part of their reaction to past research, current T-M research has been claimed by eastern researchers to be a subject best studied and understood by eastern researchers (Hwang,

2003a; Yang, 2006). Notions of patriotism to one's own cultural psychology gave birth to what is now known as indigenous psychology and will be further presented in Chapter Two.

The phrase, "the world is getting smaller" is a tribute partially paid to modernity. On a larger level, inherent in the research conducted in T-M is the fear that societies become more homogenous as people develop more modernistic attitudes, beliefs and values. Hwang (2003a) wrote "with the aid of modern mass media, knowledge of modernity can now penetrate non-Western people's lifeworlds and, as a result, colonize them in the various domains of life" (p. 247). Inglehart and Baker (2000) noted that much fear surrounding such changes as modernity, modernization, urbanization or westernization is the impression that societies and its value systems are moving towards a "McWorld" (p. 22). The "McWorld" is an allusion to the nearly indistinguishable McDonald's restaurants that have sprouted around the world, as if Western dominance is continuing its colonialization on developing countries. In 1964, Marcuse, a prominent figure of the Frankfurt School and a neo-Marxist movement, predicted that the new modernization of the industrial society would be a guise through technological advancement of creating a new totalitarian society without violence and terror (Hwang, 2003b). From several eastern researchers' viewpoints, Marcuse's prediction rings true as the "advancement of technology enables modern society to penetrate into people's leisure time and to occupy people's minds through television and other mass media" (p. 257). Hwang (2003) agrees with Marcuse by stating non-Western psychology has been colonized by Western modes of thought through various social forms such as mass media. The fear of such a future and its erroneous association with modernity is likely the result of such emotional laden scale items and research articles,

which is likely to result in skewed data. A section elucidating the differences between modernity and notions such as modernization, urbanization and westernization will be discussed in latter sections.

American researchers also played a role in T-M research to cause emotionally laden reactions by eastern researchers. Armer and Schnaiberg's (1972) review of past T-M research found that several scales mistakenly correlated modernity with westernization, which brought a negative connotation to traditionality during World War II, when anti-western and anti-eastern sentiments were rampant. The miscorrelation between T-M and westernization also furthered the misconception process that modernizing one's society or values made one's society more westernized and modern (i.e. first world countries) left all other countries look as if they possess traditional and non-modernized "nomadic" view (Bendix, 1967, p. 292). Additionally, it was a popular notion for researchers to claim western culture to be "morally superior" (Inglehart & Baker, 2000, p. 19), which further equated traditionality with inferiority. Armer and Schnaiberg's (1972) critique of past T-M literature discovered correlating traditionality with deviance and delinquency. Such literature presented by western researchers held biased viewpoints, which often appeared degrading to their eastern counterparts. The backlash at the culturally biased research is still found in current T-M research by cultures that strongly identify traditionality as part of ancestral culture. Ironically, the similar emotional laden wording continues to appear in the literature, signaling the need for more impartial research, which may better clarify and elucidate the conceptualization of T-M.

The bias in current conceptualization of T-M and scale development appears to reside with who is most interested in studying the two constructs. With the decline of Western interest and research of T-M in the 1960's, the current conceptualization of T-M possess a strong eastern

flavor. There is now a desire for Eastern psychology to gravitate towards an indigenous psychology paradigm in a deliberate act to shed western influence, including research and counseling paradigms. The indigenous paradigm views modernity as a reaction from Eastern society to Western society (Chang et al., 2003). This culturally loaded viewpoint is likely to influence the conceptualization of T-M and bias the item selection and generation process. For instance Yang (2006) calls the field of psychology “artificially transplanted” by Western thought (p. 299). He added “Western psychologists do not have such phenomena and issues [such as traditionality and modernity] for investigation” (Yang, 2003, p 279). These strong reactions indicate how the conceptualization of T-M is progressing and in which way they are progressing. This project hopes to provide a more impartial contribution to T-M research, which reconciliates both eastern and western research.

T-M’s controversial history and elusive nature warrants more empirical scrutiny and heightened multicultural awareness. The relevancy of T-M to Counseling Psychology is more prominent than ever. According to the Mission Statement of the 2008 International Counseling Psychology Conference, one of the “topics of great importance” is “attention to global and international psychology” (International Counseling Psychology Conference, para. 1). By contributing to the growing independence between eastern and western psychology, the field of Counseling Psychology can contribute to empowering a large historically oppressed modality of thought and training. Because Counseling Psychology emphasizes social action and advocacy (Crether, Torres & Nash, 2008; Goodman et al., 2004), it is particularly important to continue to conceptualize T-M and how it relates to the values of AAPI. Hopefully with better understanding of T-M, more intervention options will be available for a wider range of clients in therapy.

The Unidimensional Versus Multidimensional Hypothesis

In the beginning of his research, Yang (1981) indicated that T-M were two polarities on a continuum in direct contention with one another, which is also known as his unidimensional theory. The unidimensional view states that as levels of modernity increases, the level of traditionality decrease and vice versa. The unidimensional view was replaced by Yang in the latter half of his research in 1985. He currently views the two constructs as multidimensional (Yang, 1995; 2003; 2006). The multidimensional viewpoint states T-M reside in various aspects of life, such as family, work and gender roles. Although a person may hold more modernistic gender values, that person may also hold more traditionalistic work values at the same time. In contrast, the unidimensional viewpoint generally states that a person is traditional in all aspects of his/her life whereas the multidimensional viewpoint explains that a person may be traditional in some aspects of his/her life and modernistic in other aspects.

Yang (2003) further stated his original unidimensional conceptualization of T-M from the 1980's noted that people remained roughly the same level of T-M throughout their lives and do not fluctuate. However the latter half (multidimensional) of Yang's research indicated the belief that people's levels of T-M fluctuate throughout their lifetime. Finally, Yang also changed his original theory where he believed T-M were uniform throughout different cultures. His recent theory has changed stating he believes T-M are different and change across each culture, which is also known as the multiple modernities hypothesis and will be further discussed in the latter sections.

Yang's change in conceptualization of the two constructs sparked much criticism in the empirical world. Yang's discoveries, especially the multidimensional hypothesis, were greatly criticized by his colleagues and continue to be controversial today with advocates of both his old

theory and new theory. Prior to Yang's time, western researchers had also debated over similar issues. American sociologists, Inglehart and Baker (2000) noted two schools of thought, which echoed similar hypothesis as Yang. One hypothesis, the convergence hypothesis, states that economic and political factors in societies drive cultural change, resulting in the shift from traditionality to modernity and echoes Yang's previously determined unidimensional view. The other hypothesis is the persistence hypothesis, or that some traditional values will persist despite economic and political changes and is largely independent of economic conditions, which is reflective of Yang's current multidimensionality view. In other words, the persistence hypothesis indicates that certain traditions may persist, or change slower, despite the country's cultural climate. The sociologists' views are interesting to note because the unidimensional and multidimensional hypothesis appear at both the societal and individual level, indicating a strong argument for the existence of both the unidimensional and multidimensional viewpoint.

The debate between unidimensionality and multidimensionality also reflect in scale construction. Hwang (2003a) criticized Yang's multidimensional scale, remarking at the unidimensionality of Yang's 14 factors on his Chinese Individual Traditionalism Scale (1991) when pitted against his Chinese Individual Modernity Scale (1991), which Yang revised after his shift to the multidimensional view. Hwang (2003a) criticized Yang's conceptual schemes and concluded that the essence of his themes continued to reflect unidimensionality. Yang (2003) responded that although it may appear that his conceptual schemes lay at polarities, or were unidimensional, semantic opposites did not necessarily represent psychological opposites. He pointed out that a factor name is only "an initial label to designate a hypothetical psychological construct for the sake of temporary convenience" and "it may not convey much about the psychological essence of the construct" (p. 277).

Other researchers have also weighed in on this debate. Pek and Leong (2003) concluded their study on gender and sexism that Yang's two scales on T-M (2003) were "substantially negatively correlated", indicating a dichotomous, unidimensional relationship (p. 44). The researchers concluded, "Instead, the results imply that Chinese traditionality and modernity fall on bipolar ends of the same continuum". However, Pek and Leong (2003) also discovered that sexism was not conversely related on the two scales, which would likely have been the case if T-M represented unidimensionality, illustrating the disagreements surrounding unidimensional and multidimensional scale construction.

The unidimensional-multidimensional debate also occurred in western research. American sociologists began to conceptualize T-M as a multidimensional concept near the end of the research process in western research. Gusfield (1965) endorsed beliefs of multidimensionality even before the theory was espoused by Yang in the 1980's. Gusfield (1965) noted that

"the all too common practice of pitting traditionality and modernity against each other as paired opposites tend to overlook the mixtures and blends which reality displays. Above all, it becomes an ideology of antitraditionalism, denying the necessary and usable ways in which the past serves as support, especially in the sphere of values and political legitimating to the present and future" (p. 362).

Much like Yang's later research, Gusfield (1965) believed that "rather than one being replaced by the other, the two constructs could coexist and be mutually reinforcing" (p. 356). He further noted Gandhi was a good example of illustrating the coexistence of T-M, where Gandhi espoused principles of traditional spiritual and religious beliefs but also combined them with modernistic social and political union. However, other American sociologists' scales, which will

be reviewed in Chapter Two, used a unidimensional model when constructing their scales. The author is unaware of any western multidimensional T-M scales.

A unidimensional scale will be employed for purposes of this project for the following reasons:

1. According to Dawis (1987), a strong theory of construct must be used when beginning scale development. Although the evidence on both unidimensionality and multidimensionality remain unsettled, a review of the literature provides more unidimensional scales than multidimensional scales. From the viewpoint of the empirical paradigm, sufficient evidence has not been discovered by the author to warrant a multidimensional scale structure.
2. Although Yang's research currently documents utilizing a multidimensional viewpoint, his research has been conducted in a different population (i.e. Asians) versus the intended population for this project, which is Asian-Americans/ Pacific Islanders (AAPI). Therefore, the multidimensional view may not generalize to a different population. Instead, a conservative stance will be employed with the unidimensional scale. However, this is not to declare that T-M may not be multidimensional. Several initially believed unidimensional constructs moved towards a multidimensional structure, such as acculturation, femininity and masculinity as well as positive versus negative affectivity (Miller, 2007).
3. Yang's current research will also be represented in this project because the notion of the empirical paradigm, which is discussed in Chapter Two, will be the theoretical framework of choice for this project.

Scope of the Study

The purpose of this study is to develop and provide preliminary evidence of T-M in a constructed scale. Exploratory factor analysis (EFA) is used during the initial development of scale construction (Worthington & Whittaker, 2006). The goals of EFA will indicate if any relationship exists among factors on the scale and decipher the common variance (Tinsley & Tinsley, 1987). Confirmatory factor analysis (CFA) is utilized once a scale is revised after EFA and indicates whether or not the scale is valid and confirms the existence of variables, in this case, T-M. However, the scale will be developed with the intent of utilizing CFA. This project will end with a scale ready to be utilized in recruiting participants for a CFA. Therefore, this project will not be able to confirm the existence of T-M but aims to initiate the investigative process.

Hypothesis

Based on the scope of the project, the hypotheses are:

1. A five factor model will emerge from the scale
2. The interrelationship among the five factors will indicate the potential existence of T-M based on the assumption of a unidimensional viewpoint

Limitations

One of the limitations of this study is the methodology that will be employed to gather data. The target group participants will be mostly recruited via the internet, which limits recruitment because participants must have access to a computer. Although some paper documentation will be provided, internet recruitment will be the main method of gathering data. This could create an uneven distribution of participants' demographics.

A second limitation of the study includes possible language barriers for participants taking the scale. According to the U.S. Census (2000), nearly fourth-fifths of Asians in the U.S. use a non-English language at home. Furthermore, 29% of AAPI households fall under the category of “language isolation”, or the degree to which another language other than English is spoken in the household. The U.S. Census considers someone as linguistically isolated if no one over the age of 18 speaks only English in the household or no one in the household marks “speaks English very well”. This carries ramifications for this scale, which will largely be offered in English. Participants may not understand the scale fully or may be less inclined to take a scale that is not offered in their native language. However, steps have been taken to ensure the vocabulary on the scale is appropriate, which will be further detailed in Chapter Three.

This project will also be operating under the assumption that value systems, such as those reflective of T-M, can be captured within a quantitative Likert scale format. As discussed in previous sections and elaborated in Chapter Two, several researchers have doubted the existence of these two constructs due to their evasive conceptual nature. The delimitations section will be further discussed in Chapter Two. Because a strong, consistent empirically validated definition of T-M is currently non-existent, the definition of T-M used in this project will not be based on any previous definition of T-M. Furthermore, past research has not focused on AAPI and will not accurately represent the values or experiences of AAPI. The factors and content of the proposed scale will be based on a review of literature and feedback from two panels of experts.

Another important factor to consider in T-M research is translation. Although many eastern researchers have had a strong grasp on English and were able to access the research conducted by western researchers, the same situation unfortunately does not apply with western researchers interested in accessing eastern literature. Several research articles and chapters of

books on T-M were written and are continuously written in other languages, especially in Chinese. As Hwang (2003a) stated “language is the most important carrier of cultural heritage. It is the medium through which lifeworlds are comprehended, analyzed and recorded (p. 243)”. Without a firm grasp of the different languages that have presented research articles on T-M, there is the possible chance that some topics may be overlooked or misinterpreted when the author is not directly involved in the translation. Although some items were interpreted (i.e. Yang’s 2007 scale from Mandarin Chinese into English), some subtle differences may exist between the Chinese and English versions. The language barrier inherent in T-M research is a call for international researchers to trust and collaborate with one another for the sake of advancing empirical research.

Definitions of Terms

Included below are a set of key definitions for the remainder of this project. Detailed discussion of each hypothesized factor of the scale will be discussed in Chapter Two.

1. *Acculturation*- “the cultural adaptation that occurs as the result of contact between multiple cultures”, which occurs at both the individual and societal levels (Miller, 2007, p. 118).
2. *Ancestral culture*- the culture and ethnicity most dominant in one’s family lineage.
3. *A priori factor*- a proposed factor prior to factor analysis.
4. *Construct*- the proposed variable(s) under consideration (DeVellis, 2003). In this project, traditionality and modernity are the constructs.
5. *Content validity*- “...the extent to which a specific set of items reflects a content domain. It is the extent to which a measure ‘behaves’ the way that the construct it purports to

measure should behave with regard to established measures of other constructs”

(DeVellis, 2003, p. 49).

6. *Cronbach's Alpha*-Statistical procedure used in exploratory factor analysis to determine the internal consistency of items within a given factor.
7. *Cultural Maintenance*- an a priori factor which assess participants' adherence to their ancestral culture's influence, including preference of clothing, food, patriotism, language fluency and understanding of the folklore and history of their ancestral culture.
8. *Emotional Regulation*- an a priori factor that consists of evaluating participants' coping styles and the importance of maintaining one's image, or face.
9. *Exploratory factor analysis*- a statistical procedure used to “assesses the construct validity during the initial development of an instrument” in order to determine any latent variables in the scale (Worthington & Whittaker, 2006, p. 807).
10. *Face validity*- “a set of items that assess what they appear to measure” at face value (DeVellis, 2003, p. 57).
11. *Factor*- identified latent construct from scale development (Worthington & Whittaker, 2006).
12. *Factor analysis*- “determines how many latent variables underlie a set of items” (DeVellis, 2003, p. 103). “One of the most prevalent uses of factor analytic techniques is to support the validity of newly developed tests or scales...” (Worthington & Whittaker, 2006, p. 807).
13. *Familialism*- an a priori factor that measures participant's attitudes related to one's adherence and understanding to traditional hierarchical values in the family unit, commitment to the family and values regarding marriage.

14. *Gender Beliefs*- an a priori factor that measures participant's attitudes towards one's identified and socialized gender. Gender also measures the presence of egalitarian attitudes and notions of equality.
15. *Harmony*- "guides behavior and emotion displays that promote conflict-free relationships" (Wang et. al., 2010, p. 413).
16. *Item variance*- "the range of scores obtained for an item..." (DeVellis, 2003, pg. 93).
17. Kaiser Criterion- is the most common test used to determine whether the scale under investigation can be factored (Costello & Osborne, 2005).
18. *Modernity*- the cultural adaptation and incorporation of values at the individual level in order to accommodate a changing society.
19. *Multidimensionality*- when factors "occur on several different levels of dimensions or domains" (Miller, 2007, p. 120).
20. *Posteriori factor*- a proposed factor prior to factor analysis.
21. *Reliability*- "...proportion of variance attributable to the true score of the latent variable..." (DeVellis, 2003, p. 27).
22. *Rotation*- an option as part of factor analysis chosen to help clarify the underlying structure of data (Costello & Osborne, 2005; DeVellis, 2003).
23. *Scale*- "a collection of items, [where] the responses are scored and combined to yield a scale score" (Dawis, 1987, p. 481).
24. *Spirituality/ Religiosity*- an hypothesized factor that consists of adherence, practice and understanding of one's spiritual/ religious values of one's ancestral lineage.
25. *Traditionality*- the perseverance of values reminiscent of one's ancestral culture at the individual level. This definition was later changed to the perseverance of values

reminiscent of one's ancestral culture at the individual level in reaction to changes at the societal level.

26. *Validity*. "...whether the variable is the underlying cause of item covariation..."

(DeVellis, 2003, pg. 49).

27. *Values*- basic set of standards or criteria that guide human thoughts and actions" (Sinha & Kao, 1988).

28. *Unidimensionality*- normally includes two variables where "scaling in one direction can result in a measure that does not correlate highly with another that is scaled in the opposite direction" (Dawis, 1987, p. 488).

Summary

Chapter One introduced T-M, the purpose and significance, scope, hypothesis, limitations and definitions used in this project. Chapter Two will introduce the theoretical paradigm employed in this project as well as present an in-depth review of past empirical literature on the conceptualization and scale development process of T-M, closely associated constructs as well as the hypothesized factors of the constructed scale.

CHAPTER 2

LITERATURE REVIEW

Introduction

Chapter Two will discuss the theoretical paradigm used for this project, trace traditionality and modernity (T-M)'s conceptualization process and scale development history, provide a brief discussion of other constructs commonly mistaken or used synonymously with T-M and conclude with presenting the hypothesized factors that will be used for scale construction in this project.

Theoretical Paradigm

Without a strong conceptual and theoretical basis, scale development can be a shaky process (DeVellis, 2003; Hwang, 2003a). The largest struggles documented in empirical research on T-M appear to be defining the constructs in a consistent and clear method (Armer & Schnaiberg, 1972; Levy, 1966; Schnaiberg, 1970). Since the beginning of research on T-M from after World War II (Bendix, 1967; Zhang et al., 2003), philosophical debates and disagreements have encompassed a large portion of T-M literature. This section will include debates on the theoretical paradigms used in T-M research

The theoretical level must be analyzed firstly in order for researchers to study T-M Hwang (2003a). Hwang (2003a) acknowledged that strong debates and controversies surround T-M ranging from the origin and ontology of the two constructs to the paradigms/ theoretical approaches to the methodologies used to study them. The current research paradigm popularly used for T-M research is the indigenous research paradigm. Most of the discussion will center on

this theoretical paradigm and the paradigm chosen to proceed with this project, the empirical paradigm.

The Indigenous Psychology Paradigm

Eastern psychology began to gravitate towards what has been noted as indigenous psychology, to investigate constructs commonly researched in non-Western psychology (Hwang 2003a; Leong & Chang, 2003; Yang, 2006). Indigenous psychology is to “take informal folk theories of psychological functioning and formalize them into psychological theories” (Greenfield, 2000, p. 224) and incorporate each culture’s roots in their own psychological framework (Kim, 2002). However, some researchers have noted that the indigenous psychological paradigm espouses the belief that societies are becoming psychologically more similar, such as the fear of the “McWorld” as discussed earlier in Chapter One. As a result, this framework emphasizes the growing need for a different psychological representative of each indigenous culture to differentiate from its historically Western theories (Chang et al., 2003; Yang, 2006). Hwang (2003) declared indigenous psychology as a result of societal modernization, where researchers are able to depict their native psychology in an empirical fashion.

Depending on the theoretical paradigm employed in T-M research, the conceptualization and view of these two constructs can be immensely different (Yang, 2003). Relatively unknown to the majority of Western researchers, the movement to establish independence from Western psychology has been occurring in China for the last thirty years and has recently been gaining more momentum (Hwang, 2003a). Eastern psychologists have been vocal in their beliefs that western psychology has been a domineering modality of thought in the psychological world. Chang et al. (2003) stated, “Central to the concerns of non-Western societies is whether

modernization will lead to the destruction of their cultural traditions and become “westernized”. Hwang (2003a) echoes the same sentiment paralleling western paradigms to colonization. Yang (2006) further describes western psychology with words such as “artificiality”, “superficiality” “incompatibility” and “alienated” (p. 288).

In the case of T-M and scale construction, items were generated with the intention of representing an indigenous view and minimizing any influence of outside cultures. Yang (2003) reported that in order to conduct “rigorous” indigenous research, items must be selected based on the “distinguishing features of that country’s cultural traditions” versus “distinguishing features of contemporary Western culture” (p. 279). However the generalizability of T-M scales are limited because of the indigenous paradigm’s emphasis on representing a specific culture.

The Empirical Paradigm

Not all researchers agree with indigenous psychology’s revival of T-M. Yang (2003) admitted to not beginning with any theoretical or conceptual framework. Instead he wrote “I decided to start from my own and other researchers’ observations of and experiences with the relevant Chinese psychological and behavioral attributes as they manifested in Chinese everyday life, to formulate a comprehensive conceptual framework...” (p. 264). Dr. Yang’s approach to the investigation of T-M as well as scale development can best be called an “empirical approach” also known as the “psychometric trait” approach (Hwang, 2003a; Yang 2003). This approach bases construct conceptualization and scale development on expert and researcher opinions. The empirical approach uses empirical data from journals as well as solicited opinions and research from those well established in the field of research (Hwang, 2003a; Yang, 2003), which also follows DeVellis’ (2003) scale construction recommendations. This approach tends to emphasize

personality aspects, rather than the contextual or societal factors (Hwang, 2003b), which has been a concern in T-M scale development in the past.

According to Yang (2003), his original research consisted of scale items developed from related questionnaires, readings of widely regarded Chinese philosophy and research conducted by western psychologists on their perspectives of Chinese culture. After scale items were created, a panel of experts judged Yang's items (Hwang, 2003a). DeVellis (2003) reiterated that incorporating researchers' and other professionals' opinions on the constructed scale is an important part of the scale development process.

However, choosing to research T-M without the indigenous paradigm has ramifications. Hwang (2003a) greatly criticized Yang for not employing an indigenous framework whilst conducting his research and questions the applicability of such research to the Chinese population. When questioned about his techniques, Yang (2003) replied that given the chance to redo his research, he would continue to employ the psychometric/ empirical approach, despite its dissociation with indigenous psychology. His reasoning was that the empirical approach focuses more on the internal human psyche, rather than the external events surrounding humans, such as the values emphasized by the indigenous approach. Unable to reach a mutual understanding, Hwang (2003b) closed his article, "In Search for a New Paradigm for Cultural Psychology" and stated that the current research on T-M cannot be complete until a sound theory is constructed.

It should be noted that western researchers did not directly state any theoretical or conceptual approaches to their study of T-M. Part of the reasoning is that the western researchers were largely sociologists following a different field of thought. Additionally, eastern psychologists believe that culture was not as strongly emphasized as the current research reflecting T-M (Hwang, 2003a; Yang, 2003; Zhang et al., 2003).

Whereas progressive steps have been taken to advance the notions of T-M at the individual psychological level, the bias found in research originating from using mostly one research paradigm may yield inaccurate data. With both western and eastern thought criticizing the generalizability of the conceptualization of T-M and the scale construction process, an indigenous approach would not be applicable to the current project. The U.S.'s western roots, which has been a point of contention for indigenous researchers also makes this project unfit for utilization of the indigenous psychology paradigm. Finally, the importance of conducting research in a wide variety of settings in order to continue understanding T-M (Yang, 2003a) concludes that the most applicable conceptual framework to follow for this research project will be the empirical paradigm.

Conceptualization Process

The history of T-M research has been recorded in empirical literature as a seemingly circular process (Armer & Schnaiberg, 1972; Levy, 1966; Schnaiberg, 1970). Armer and Schnaiberg (1972) reported difficulty validating T-M scales because of the lack of comparative scales, especially for test-retest reliability and/or construct and discriminant validity. Difficulty with settling on an agreeable, concise and specific conceptualization mislead earlier research to correlate traditionality with popularly researched constructs at the time of World War II, such as anomia, alienation and middle-class values as a comparative means for validation, although it created misleading results. Armer and Schnaiberg (1972) concluded that, "In terms of our study, it could be argued that the relatively high correlations of alienation and anomia with traditionalism are a function of the fact that the 'traditional man' in contemporary America is a social deviant and is therefore more likely to be alienated and anomic" (p. 313). Although the authors were skeptical that a traditional man could be a "social deviant", such correlations

represented the difficulty researchers encountered while constructing appropriate scales for measuring T-M. Armer and Schnaiberg (1972) concluded that T-M should be discriminant from such variables as alienation and anomia due to their misleading characterizations of traditionality. They also concluded that because alienation and anomia were discovered to be indiscriminant, previous popularly administered T-M scales failed to provide statistically significant measures. Armer and Schnaiberg (1972) summed up their efforts with "...the measurement of modernity has apparently been unsuccessful" (p. 315).

Because two different branches of thought, American sociologists and Asian psychologists, researched T-M at two different points in time, this section will be divided into traditionality's definition as presented by western researchers and then by eastern researchers. The section will be concluded with modernity's definition as presented by western researchers and then by eastern researchers.

Traditionality: A Western Perspective

Because T-M is largely viewed with a societal and cultural component, it is important to note that the availability of T-M literature varies by culture and societies and as a result, the research amount and focus vary. As a general statement, western sociologists focused more on studies concerning modernism, or the study of modernity at the societal level, than traditionalism, or the study of traditionality at the societal level. The most salient studies at the individual level came later as eastern psychologists took an interest in psychological variables.

Bendix (1967) articulated traditionality as the transformation of "nomadic peoples" into settled agriculturalists, marking the beginning of preindustrial, agrarian societies" (p. 292). This definition represented the United States' gradual cultural shift towards understanding the ramifications of societal change during the 1960's and early 1970's. Sociologists began to

closely analyze the change and maintenance of societal values as related to society's economy, political nature and stability of its country.

Although traditionalism's definition inherently possesses an element of preservation, or avoidance of change, its definition is not static. Much like modernity, traditionality is also a product of change. Gusfield (1965) stated "it is fallacious to assume that a traditional society has always existed in its present form or that the recent past represents an unchanged situation" (p. 352). However, traditionality changes are slower than changes of modernity. Inglehart and Baker (2000) remarked that "the influence of traditional value systems is unlikely to disappear, however, as belief systems exhibit remarkable durability and resilience" (p. 49). Sociologists concluded that traditionality's conceptualization consists of an element of change and exists in some relationship to modernity. Inglehart and Baker (2000) explained the evolution of values based on traditional thought:

"When survival is uncertain, cultural diversity seems threatening.... People cling to traditional gender roles and sexual norms, and emphasize absolute rules and familiar norms in an attempt to maximize predictability in an uncertain world. Conversely, when survival begins to be taken for granted, ethnic and cultural diversity become increasingly acceptable- indeed, beyond a certain point, diversity is not only tolerated, it may be positively valued because it is interesting and stimulating" (Inglehart & Baker, 2000, p. 28).

Traditional values evolve as societies evolve. The people of preindustrial societies often share similar values, such as low tolerance levels for abortion, divorce and homosexuality as well as emphasize male superiority, parental authority, family life and spirituality. This in group versus out group mentality secured psychological safety in the face of an unstable society. Thus,

according to Inglehart and Baker (2000), traditionality is viewed by western sociologists as promoting one's means of survival through the adherence of long-standing values, which has procured ancestral survival. Once the society stabilizes and flourishes economically and politically, the acceptance of diversity, or modernistic values, also flourishes.

However, history has shown that societal values can shift from traditional to modern and back to traditional values. Economic collapse can cause a shift from modernity back to traditionality as given by the example of China (Inglehart & Baker, 2000). Within its borders, China ranges from strongly agrarian to highly industrialized areas. From the 1950's through the late 1970's, agriculture was an important means of economic prosperity in China. The agrarian culture facilitated collectivistic and familialistic values as a means of cultivating a successful agricultural lifestyle. The agricultural life "tightly bound peasant men to their natal villages and peasant women to the natal villages of their husbands, thus preventing the large-scale rural-to-urban migration that otherwise would have occurred..." (Inkeles, Brooded & Cao, 1997, p. 32) and have influenced the strong family values that are espoused by Asian culture. China's traditional values were reinforced after an economic collapse in the early 1960's to 1970's. Approximately 17 million people were sent to aid with the agricultural efforts after an economic scare, thus strongly maintaining its traditional agrarian values while many other countries' traditional values rapidly changed to a more individualistic mentality (Inglehart & Baker, 2000). Additionally, the family unit was reunited as a large portion of the Chinese population returned back to their agricultural roots.

Traditionality: An Eastern Perspective

Unlike western research, the eastern perspective of traditionality resides more at the individual level. However, it is important to note that the most common population studied in

eastern T-M research has been the Chinese population. Therefore, generalizability of traditionality's definition is limited because eastern research often includes elements from this particular culture.

From an Eastern perspective, traditionality is defined as “the typical pattern of more or less related motivational evaluative, attitudinal and temperamental traits that is most frequently observed in people in traditional Chinese society and can still be found in contemporary Chinese societies, such as Taiwan, Hong Kong and mainland China” (Yang, 2003, p. 265). Themes that are commonly associated with traditionality from eastern research include submission to authority, thriftiness, conservatism, endurance, obedience, reliance and fatalism (Zhang et al., 2003). These were values reflective of conducting a successful agricultural lifestyle.

Some cultures place a strong emphasis on retaining one's cultural norms and may remain resilience in the face of rapid change. For instance, Chinese society has commonly encouraged their society to maintain the same “status quo” in order to “keep social order and the norms that have already existed to defend oneself by obeying rules...” (Zhang et al., 2003, p. 71). The traditional individual may instinctively refuse change or interaction with a society that is different from theirs; thus avoiding interacting with different cultures. As a result, traditional societies have often been criticized by more modern societies as preventing themselves from economic prosperity (Yin, 2003) and the cause of their countries' lack of political competitiveness (Zhang et al., 2003).

Modernity: A Western Perspective

Western researchers have provided a flurry of theories on the conceptualization of modernity. Gough's (1976) definition of modernity included “...a syndrome of attitudes and beliefs including progressivism, secularity, optimism, future-oriented perspectives and a sense of

personal efficacy” (p. 3). A different definition of modernity included “the nature of one’s work, the degree to which one had participated in formal schooling, one’s degree of exposure to the media of mass communication, and residence in urban rather than rural areas...” (Inkeles et al., 1997, p. 32). Armer and Schnaiberg (1972) described modernity as “a set of attitudes, values and ways of acting that are associated with a modern society...” whereas Bendix (1967) reported that modernity is associated with a certain degree of democracy in addition to more acceptance of egalitarianism. Other traits associated with modernity are accepting individual responsibility, social change, new experiences as well as urbanization and industrialization on the societal level. Freedom from regulated hierarchical social norms as well as promotion of autonomy and rights of women and people of color are also characteristics of modernity. Gough (1977) agreed that aspects of a modern society included independence from traditional authority, which is more reflective of conservative values. At the societal level, modernism is generally characterized by offering higher levels of education and an increase of technological resources (Inglehart & Baker, 2000; Schnaiberg, 1970).

Despite the various definitions from the Western perspective of modernity, the seemingly most common aspect includes a degree of flexibility and changeability. Consequently, modernity is defined as a revolution or advancement in the culture and personality (Inkeles, 1966). Gough (1977) stated, the “modern man is receptive to social change, sets future goals and objectives and is optimistic concerning his capacity to cope with present and forthcoming expectations” (p. 49). He adds that modernity is characterized by the ability to cope with new situations.

Modernity: An Eastern Perspective

Like Western researchers, Eastern researchers have also provided an abundance of definitions for modernity. At the most basic level, Yang (2003) defined modernity as “the typical

pattern of more or less related motivational, evaluative, attitudinal and temperamental traits that is most frequently observed in people in contemporary highly industrialized societies, such as those in Europe and North America, and that has been gradually acquired to some extent by people in contemporary Chinese societies during the process of societal modernization” (p. 265). Cai (2000) demonstrated in his study on measuring modernity in students residing in China that their understanding of modernity consisted of five main themes: politics, economy, technology, environment and education, thus reflecting the close connection between the individual and societal definition of modernity.

Eastern researchers agree with Western researchers that a key component of modernity is flexibility and changeability. Modernity is defined as the individual’s ability to change and adapt one’s attitudes, beliefs and values to an ever evolving society (Zhang et al., 2003). Furthermore, modernity has often been described as “relating to present or recent times as opposed to the remote past...” (Chang et al., 2003, p. 7) when impacted by societal changes, such as economic, political and technological development (Yang, 2003). As a result, people begin to change and develop new dimensions of their personality, whereas some other dimensions remain constant or resilient in the face of change. For instance, research has largely associated open-mindedness, optimism, assertiveness and egalitarianism as part of the evolutionary process of modernity (Zhang et al., 2003).

At the societal level, Patel et al., (1996) describe modernity as occurring when agricultural societies shift to a more industrialized and mechanized economy. The authors noted that a societal shift to more modern values was reflected in child-rearing differences with

“The patriarchal control that was once necessary to run the family farm and the economy diminished once children left home for urban industrial jobs. This shift in child reading

attitudes and practices became known as ‘modern child rearing’, one manifestation of the modern attitudes accompanying this societal transformation. Thus modern child-rearing approaches have been associated with the behavior of parents in western industrialized nations...” (p. 304).

Patel et al.’s (1996) definition noted the decline of traditional patriarchal empowerment as modernistic values increased and westernized. Because the agrarian lifestyle is not as pertinent as before, egalitarian attitudes towards raising boys and girls as well as more emphasis on individual rather than collectivistic achievement evolved as societies shifted toward modernistic values.

Overview of Past Scales

The following section introduces the most significant assessments in T-M scale development. The scales will be presented in chronological order, which also represents the chronological shift from western to eastern research. The scales that will be discussed include Inkeles’ Overall Modernity Scale (1966), Doob’s Modernity Scale (1967), Kahls’ Modernity-1 and Modernity-2 scales (1968), Schnaiberg’s Modernity Scale (1970), Yang’s Chinese Individual Traditionality-Modernity Scale (1984), Yang’s Multidimensional Scale of Chinese Individual Traditionality and Multidimensional Scale of Chinese Individual Modernity scales (1991) as well as Yang’s Multiple Traditionality Scale and Multiple Modernity Scale scales (2003). A brief discussion will end with Yang’s most recent scale, Multiple Factors Assessment on Traditionality and Multiple Factors Assessment on Modernity scales (2007), which is currently under investigation and has not yielded any data as of when this project was written.

Inkeles' (1966) Overall Modernity Scale

One of the largest T-M research projects conducted to date was by Smith and Inkeles in the 1960's where they developed an assessment tool after interviewing over 150 people in six countries: Argentina, Chile, India, Pakistan, Israel and Nigeria. Thirty five themes were proposed, which included political activism, role of aged, occupational aspirations, dignity valuation, general efficacy, birth control attitudes, family size, growth of opinion awareness, technical skill valuation, women's rights, co-ed work and school, openness to new experience in people and places, mass media valuation, social class attitudes and kinship obligations.

The Overall Modernity Scale (OM Scale) went through six revisions and began with 119 items (Inkeles, 1974). The sixth version, OM-6, was finalized with 14 items. Scale items included both qualitative and two different quantitative formats, where participants answered using dichotomous answer responses and utilized the Likert scale format. Armer and Schnaiberg (1972) found this instrument to have a test-retest value of .81 and an internal consistency of .64 when tested with Kahl's M-1 (1968) and Schnaiberg's Modernity Scale (1970). They also found this instrument to have an average convergent validity of .52.

Inkeles (1983) noted that the conceptualization of modernity remains controversial due to its multifaceted nature, which has evaded quantitative research for decades. Their final scale and conceptualization of modernity was criticized by Stephenson (1968) for assuming that modernistic cultures were essentially the same. Smith and Inkeles believed that a modern man was likely to possess the same traits, regardless of culture. Stephenson quipped, "whether they set out to measure the right thing" as a reaction to Smith and Inkeles' (1960) conceptualization of the modern man (p. 257).

Doob's (1967) Modernity Scale

Doob's (1967) scale on modernity was an 80 item scale from his studies in West Africa with data gathered from Tanzania, Kenya, Somalia and Uganda totaling approximately 2,074 participants. Participants used a five point Likert scale from "completely agree" to "completely disagree" with an "uncertain" option (p. 418). The measure assessed for attitudes and values concerning morality, choice of medicine, freedom of speech and political orientation. Ten scales were finalized on Doob's assessment and included temporal orientation, government, confidence and optimism, patriotism, science and determinism, conception of people, politics and leaders, and tribalism.

Results were presented with the questions divided into 5 different ratings including "strongly modern", "strongly non-modern" or "very mixed" results (Doob, 1967, p. 418). Questions such as "Usually reason is likely to be a better guide to action than feelings", "It is better not to carry a watch because then you do not have to worry about keeping track of time", and "Nothing that is said should ever be accepted on faith; proof or evidence is always necessary" were categorized as "strongly modern". Questions that were considered "strongly non-modern" included "Government and politics are so complicated that most people cannot really understand what is going on" and "I know quite well what I shall be doing ten years from now" (p. 419). The "Very mixed" category included questions such as "It is more important to obey my tribe than my government", "Children should learn obedience and respect for authority", and "A women's place is in the home" (p. 420).

Kahl's (1968) Modernity-I and Modernity-II scales

Kahl (1968) created two versions of his modernity scale after collecting data from his studies in Brazil and Mexico. The first scale was called the Modernity-1 (M-1), which encompassed 22 items. His second scale, Modernity-2 (M-2), was a shorter eight item scale. Kahl's scales both included a five point Likert format ranging from "agree strongly" to "disagree strongly" with an "uncertain" option.

Originally, Kahl's M-1 scale included 58 items and had similar content to other popular T-M measures at the time (Gough, 1976). After an analysis of items, Kahl's final M-1 scale contained 22 items with 14 themes: activism, low integration with relatives, preference for urban life, low perceived community stratification, mass media participation and low perceived stratification of life chances and mass media (Kahl, 1968)

Figure 2.1

Themes of Inkeles', Doob's and Kahl's scales

<u>Inkeles' Overall Modernity Scale (1966)</u>	<u>Doob's Modernity Scale (1967)</u>
Political activism	Temporal orientation
Role of aged	Government, confidence and optimism
Occupational aspirations	Patriotism
Dignity valuation	Science and determinism
General efficacy	Conception of people, politics and leaders
Birth control attitudes	Tribalism
Family size	
Growth of opinion and awareness	
Technical skill valuation	<u>Kahl's Modernity-1 Scale (1968)</u>
Women's rights	Activism
Co-ed work and school	Low integration with relatives
Openness to new experience	Preference for urban life
Mass media valuation	Low perceived community stratification
Social class attitudes	Mass media participation
Kinship obligations.	Low perceived stratification of life chances
	Mass media

Kahl's M-1 scale was administered with Doob's (1967) items in addition to the California F scale to 97 college students (Kahl, 1968). The 100 item scale was scaled down to 8 items, which became his M-2 scale. The eight item M-2 scale was given to 479 college students in addition to 100 randomly selected people from the telephone book. The scale correlated at .34 with Doob's (1967) scale and .25 with Kahl's M-1. Results were reported in means. Male students' mean was reported at 30.70 and nonstudents mean at 29.91. Female students' mean was reported at 31.56 and nonstudents mean at 30.33. Higher scores indicated more modernistic attitudes. Figure 2.1 compares Inkeles', Doob's and Kahl's scales.

Armer and Schnaiberg (1972) found Kahl's M-1 scale to have an average test-retest value of .80 and average internal consistency of .76 when tested with Inkeles' OM Scale (1966), Schnaiberg's Modernity Scale (1970) and various other popular instruments at that time. Kahl's M-1 scale had an average convergent validity of .53. In his review of T-M scales, Gough (1976) concluded Kahl's scale development process as "encouraging" but stated more studies were needed for further evaluation of his scale (p. 8).

Schnaiberg's (1970) Modernity Scale

Schnaiberg (1970) conducted his research in Ankara city and four villages in the Ankara province of the Republic of Turkey. Forty six items were selected for his scale construction, which were combined into six hypothesized themes: mass media, extended family ties, nuclear-family role structure, religiosity, environmental orientation and production/consumption behavior. Schnaiberg designed his scale with a unilinear model in mind and dichotomized responses for participants to pick either a "1" for "traditional" or "0" for "modern" (p. 411).

After interviewing 1,138 Turkish women and conducting a factor analysis, his scale revealed an "emancipation factor", which related to freeing women from traditional roles and

emphasizing egalitarianism (p. 411). His final scale consisted of 24 items with factors involving nuclear family role structures, mass media participation and environmental orientation (Armer & Schnaiberg, 1972). This instrument was discovered to have an average test-retest value of .74 and average internal consistency of .64 when tested with Inkeles' OM Scale (1966), Kahl's M-1 (1968) and other popular instruments of that time. The instrument also had an average convergent validity of .42.

Yang's (1984) Chinese Individual Traditionality-Modernity Scale

Yang's first scale was created and researched from 1972-1984 and named the Chinese Individual Traditionality-Modernity Scale. Extensive research was not found in translated documents or Western journals on this particular scale. The little research gathered on Yang's Chinese Individual Traditionality-Modernity Scale indicated that he utilized a unidimensional approach (Hwang, 2003a; Yang, 1981; 2003; 2006). One particular study that noted using this scale was conducted by Yang in 1981. Using the Rorschach test and Individual Traditionality-Modernity Scale (1981), Yang discovered that students who scored higher on modernity had a shorter reaction time and produced more various responses when prompted by the Rorschach. The experimenters interpreted the shorter latency response time to general decreased cautiousness and conformity, commonly associated as a result of political and economical stabilization. The conclusion of this study revealed that Chinese students who scored higher on modernity also tended to be less socially oriented, or deemed more impulsive.

Yang's (1991) Multidimensional Scale of Chinese Individual Traditionality and Multidimensional Scale of Chinese Individual Modernity

From 1985-1991, the Multidimensional Scale of Chinese Individual Traditionality (MS-CIT) and Multidimensional Scale of Chinese Individual Modernity (MS-CIM) were constructed

and researched (Hwang, 2003a; Yang, 2003; 2006). As noted in Chapter One, division on whether T-M are unidimensional or multidimensional marked a significant change in quantitative development for T-M. Yang's MS-CIT and MS-CIM were the first of his series of scales to depart from a unidimensional viewpoint and shift to a multidimensional construction.

Each of Yang's scales included an adult and college student version, resulting in four separate scales (Yang, 2003; 2006). Each of the four scales encompassed five subscales. The five subscales on the adult and college MS-CIT scales included submission to authority, filial piety and ancestral worship, conservatism and endurance, fatalism and defensiveness and male dominance. The five subscales for the adult and college MS-CIM scales included egalitarianism and open-mindedness, social isolation and self-reliance, optimism and assertiveness, affective hedonism and sex equality. All scales included a four point Likert scoring system, including "strongly disagree", "partially disagree", and "partially agree" or "strongly agree". The Cronbach alpha ranged from .73- .88 for the traditionality scale and from .67-.78 on the modernity scale, depending on which scale was used. A five-item version of the MS-CIM was determined to have a reliability of .60 when used in Pek and Leong's (2003) study on sexism.

Yang's scales were criticized that they continued to appear unidimensional despite his shift to a multidimensional view (Hwang, 2003a). Yang's themes for traditionality included orientation to the collectivistic, familistic, particularistic, submissive- to-nature, other, past, self-suppressive, authoritarian, dependent, to-be-similar, modesty, external- control, self-contentment and relationship (Yang, 2003). Yang's modern themes included orientation to individualistic, institutionalistic, universalistic, dominating- the- nature, self-orientation, future, self- expressive, egalitarian, independent, to-be-different, competition, internal- control achievement, and tolerating-of-others.

However, psychometric analysis discovered that the Male Dominance scale from the MC-CIT was negatively correlated with the Sex Equality subscale on the MS-CIM, indicating evidence for the unilinearity theory (Yang, 2006). The other four subscales on the MS-CIM and MS-CIT were only minimally correlated (Hwang, 2003a). As was discussed in Chapter One, other researchers have not been satisfied with the minimal correlation and continue to criticize that Yang's scales do not appropriately depict a multilinear view of T-M.

Yang's (2003) Multiple Traditionality Scale (MTS) and Multiple Modernity Scale (MMS)

Yang created a different set of scales and released its data in 2003. The resulting scales were termed Multiple Traditionality Scale (MTS) and Multiple Modernity Scale (MMS). These two scales proposed twenty psychological characteristics, including sense of personal efficacy (antifatalism), low integration with relatives, egalitarian attitudes, openness to innovation and change, belief in sex equality, achievement/ motivation, individualistic orientation, independence or self-reliance, active participation, tolerance of and respect for others, cognitive and behavioral flexibility, future orientation, psychological differentiation, empathetic capacity, need for information, propensity to take risks in life, extralocal orientation (non-localism), secularization in religious belief, preference for urban life, as well as educational and occupational aspirations.

Despite the controversy surrounding the multidimensional nature of modernity and traditionality, a factor analysis revealed Yang's Multiple Traditionality Scale to have five factors (Hwang, 2003a), which is the most up-to-date factorial analysis on any T-M scale. Factor analysis on the traditionality scales revealed five factors of filial to parents/ worship ancestors, comply with authority self content/ conservative, fatalism/ self-protection and male superiority. Factor analysis on modernity revealed five factors of egalitarian, open-mindedness, independent/ fending for oneself, optimistic/ aggressive, valuing affections and sexual equality.

Similarly to Yang's 1991 scales, closer inspection of the list of the MTS and MMS' factors depicted a unidimensional view, thus seemingly undermining Yang's theory of multilinearity (Hwang, 2003a). Hwang (2003a) noted, "it is interesting to find that, as revealed by factor analysis, most of the two sets of five factors can be paired" (p. 249). For instance, the MTS's male superiority could be paired with the MMS' sexual equality factor. The MTS' comply with authority or fatalism/self-protection factors could easily be paired with the independent/ depending for oneself and optimistic/aggressive factors. As noted in Chapter One, when Yang was again criticized by the Eastern scientific community, Yang (2003) answered that semantics was unable to catch the subtle yet distinct differences between the factors and insisted that his scales were multidimensional.

Wording on scale items is pertinent to the outcome of the scale (DeVellis, 2003). Unfortunately, T-M scales in eastern research have been criticized for using leading wording. Hwang (2003a) stated that Yang's items on his scales have been worded poorly or appeared biased. For instance, Hwang believed items such as "most people are honest and reliable; they will not plot against others" is not a direct measure of modernity (p. 255). Additionally, Yang's items such as "the economy can become prosperous only under a trade system with free competition" and "the progress of science and technology brings bright prospects for humanity" are items that carry loaded meanings, which may not necessarily indicate one's personality or values, but is a reflection of the ideologies of the government at the societal level. He summarized that Yang's scales were more reflective of the societal rather than individual level, which was similar to the western sociologists' research.

Yang's (2007) Multiple Factors Assessment on Traditionality and Multiple Factors Assessment on Modernity

To date, empirical literature has not been supplied on the following scales, which were obtained through personal emails with Dr. Yang in 2007. The scales were translated from Mandarin Chinese to English and back translated from English to Mandarin Chinese to ensure validity and preciseness of the translations. The scales sent from Dr. Yang included the Multiple Factors Assessment on Traditionality (MFAT) and Multiple Factors Assessment on Modernity (MFAM) for the adult and college population. Themes on the MFAT included male superiority, fate and superstition, moderation attitude/ Golden mean of the Confucian school, filial piety and respect for elders, relationship attitude. Themes on the MFAM included independence and self-determinism, planning and learning style, fairness and justice, self-discipline attitude and expenditure attitude. Factor analysis has not been conducted and the response format had not yet been determined when the contact was made.

As noted from the above discussion, themes proposed for T-M scale construction has differed throughout the decades. However some similarities exist. For instance, nearly all the scales mentioned components of gender, familial responsibility and openness to change. See Figure 2.2 for a comparison between the factors on Yang's 1991, 2003 and 2007 scales.

Figure 2.2

Comparison Between Yang's MS-CIT/CIM, MTS/MMS and MFAT/MFAM

<u>MS-CIT (1991)</u>	<u>MTS (2003)</u>	<u>MFAT (2007)</u>
Male dominance	Male superiority	Male superiority
Submission to authority	Filial to parents/ worship ancestors	Relationship attitude
Filial piety/ ancestral worship	Comply with authority	Filial piety/ respect for elders
Conservatism and endurance	Self content/ conservative	Moderation attitude
Fatalism and defensiveness	Fatalism/ self-protection	Fate and superstition
<u>MS-CIM (1991)</u>	<u>MMS (2003)</u>	<u>MFAM (2007)</u>
Sex equality	Sexual equality	Fairness and justice
Social isolation/ self-reliance	Independent/ fending for oneself	Independence/ self-determinism
Affective hedonism	Valuing affections	Self-discipline attitude
Egalitarianism/ open-minded	Egalitarian, open-minded	Planning and learning style
Optimism and assertiveness	Optimistic/ aggressive	Expenditure attitude

Commonly Mistaken Constructs

A discussion of constructs often erroneously associated with T-M will be briefly introduced in this section to further clarify the conceptualization process of T-M and help elucidate the reasoning for determining the a prior factors and questions for this project's scale.

Modernization.

Possibly the most common construct mistakenly associated with modernity is modernization. Modernization is a similar construct to modernity but takes place at a societal level, whereas modernity is at the individual level (Zhang et al. 2003). Sociologists popularly acknowledge modernization as a societal shift from agrarian to industrialized goods (Lenski & Lenski, 1988). Modernization is also defined as the transition of societies from agrarian to an industrialized mode of production (Zhang et al., 2003), whereas modernity is defined as the change at an individual level, which often results from modernization (Feldman & Hurn, 1966).

Chang et al. (2003) define modernization as preference for and using the most updated techniques, ideas or equipment in addition to the departure from traditional notions. Zhang et al. (2003) believe that societal modernization include democratization, industrialization and internationalization in politics, education and the economy.

Industrialization.

Industrialization has been confused with modernity because much of previous research has indicated that industrialized economies are often closely intertwined with modernistic attitudes (Inglehart & Baker, 2000). As with modernization, industrialization occurs at the societal level, particularly in terms of economic growth and development. However upon closer scrutiny, these representations of industrialized societies may be mistaken. For example, the phenomena of T-M can be found in modern day Asian countries and cities such as Hong Kong, Singapore, Taiwan and Japan, all who are known to be highly industrialized societies (Chang et al., 2003). Vice versa, industrialized economies may not possess the most modern attitudes. Inglehart and Baker (2000) discovered that highly industrialized societies, such as the U.S., are not as modernistic as people might think. They noted that the U.S.'s people hold much more traditional values and beliefs than do those in any other "equally prosperous society" (p. 49). Although the connection between T-M and industrialization remains contentious, industrialization in itself is clearly delineated from T-M.

Westernization.

To adopt more modernistic attitudes is often erroneously associated with becoming westernized. Modernism, also known as Rationality by some eastern researchers, was used to differentiate the particular thinking and worldview of scientists from the laymen population and often used to denote superior cultures or modalities of thinking (i.e. western thought) from lesser

modalities (i.e. eastern thought) (Hwang, 2003b). Additionally, researchers often correlated economic success with westernizing one's economic and political progress (Hwang, 2005). Inherent in the research was the belief that western society was equated with more powerful economies and superior political systems. As a result, Modernization Theory became wide spread in Western social scientists during the 1960s through the 1970s until the shift towards indigenous psychological research, when Modernization Theory was severely criticized for its Eurocentric views (Hwang, 2003a; Yang, 2003).

Often an indicator of westernization is changing one's habits, such as one's language of preference (Patel et al., 1996). In cities that are considered more westernized, such as Singapore, Singaporeans often learn both their native language and English (Yin, 2003). Chang et al.'s (2003) study found that scoring higher on the modernity scale in the Singaporean Chinese Values Scale was not correlated with lack of usage of the Chinese language or incorporation of Chinese media and popular culture in their everyday lives, further garnering support that westernization and modernity are not the same constructs.

Acculturation.

According to previous research, T-M seems to correlate with acculturation (Leong & Chang, 2003), possibly because all three constructs are associated with cultural change. Oftentimes, immigration from one country to another creates a venue for identity reformulation, resulting in acculturation (Talbani & Hasanali, 2000). "Acculturation can refer to the broad psychological experience of living in multiple distinct cultural contexts" (Miller, 2007, p. 119). Thus, immigrants acculturate through shedding some of their own values from their heritage countries and adopting the societal values by the current country. Patel et al., (1996) noted

acculturation as “selective, voluntary” and “bidirectional” (p. 303). Asian Americans who do not acculturate as much or rapidly as others are labeled “traditionalists” (Leong & Chang, 2003, p.1).

In Patel et al.’s (1996) study of acculturation and T-M, the researchers concluded that modernity and acculturation were moderately related. Most notably, they discovered that the length of residence in the U.S. was moderately related to acculturation and modernity for first generation fathers but not for mothers residing in the U.S. As a result, it seems that acculturation plays a part in either maintaining traditional beliefs or adopting modern beliefs, but the association needs further research to understand how close a relationship exists between acculturation, T-M and gender.

Urbanization.

Urbanization is related to living in or near urban areas (Chang et al., 2003) and is often related to modernity due to modernity’s association with urban life. For instance, results in a study conducted by Xu (2000) revealed that students residing in larger urbanized Chinese cities, such as Beijing and Shanghai, scored higher on modernity measurements than students residing in rural areas. However, other studies have not replicated this finding. Studies from Singapore, a large city with one of the busiest ports in the world, indicated that parents possessed the same levels of T-M (Chang et al., 2003). In a cross-cultural comparison, Singaporeans were also deemed to be more traditional than many Western cities that were not as large or urban, indicating that urbanization and modernity are not synonymized. Instead, it is likely other factors exist in conjunction with urbanization and T-M, with further studies needed to determine the relationship.

Socialization.

Although socialization cannot be determined the same as T-M, the three constructs may have a strong correlation. In their study of gender role socialization as it relates to T-M, Talbani and Hasanali (2000) defined socialization as “a technique of habituation and social control” to help regulate behavior and educate cultural norms (p. 616). They further defined T-M as a set “of unwritten rules that dictates how one behaves and interacts with elders, people of the opposite sex, and different age groups” (p. 625). Whereas socialization implies an action or practice of regulating behavior, T-M implies the norms that are being regulated.

Patel et al. (1996) discovered that within traditional norms, the socialization process for South Asian Indians included respect for authority, conformity and upholding certain norms related to one’s gender whereas a more modern view of socialization may include endorsement of egalitarian values and independent achievement. In their study, it was discovered that fathers who scored higher on modernity and acculturation placed more emphasis on competence and effectiveness in raising girls (i.e. modern notions of independence and ambition) whereas more traditional fathers high in acculturation placed less emphasis on manners and politeness. More modernistic mothers of boys emphasized using reasoning and persuasion and less of psychological control, such as their traditional counterparts opted to use. Overall, their study concluded that modernity and acculturation “predicted socialization values for fathers of girls and length of time in the U.S. predicted socialization values of mothers” (p. 311), which strongly indicates some sort of correlational relationship between socialization practices and T-M in addition to acculturation.

Overall, this section has posed directions for much needed research concerning T-M’s association with other variables. Past research has indicated that T-M may be associated with

acculturation and/or socialization (Patel et al., 1996). Furthermore, socialization, acculturation and T-M may also be correlated with Westernization. For instance, the more acculturated the South Asian Indian mother, the more the family valued American characteristics in their children, indicating that westernization also play a role in socialization practices. Research has also indicated that industrialization (Chang et al., 2003; Inglehart & Baker, 2000), urbanization (Chang et al., 2003) and modernization (Zhang et al., 2000) play a role in the formation of T-M values. Hence, further studies are needed to explore the relationships between all these constructs with T-M.

Hypothesized Factors Used in Current Scale Construction

According to Worthington and Whittaker (2006), a critical component of scale development is to understand the expected relationships between scale items and themes as related to the constructs in question. The themes presented below are the hypothesized factors proposed prior to factor analysis. The scale used for this project will encompass five hypothesized factors: Familialism, Gender Beliefs, Spirituality/Religiosity, Cultural Maintenance and Emotional Regulation.

Familialism.

One of the more prominent characteristics of traditional Chinese culture is the interdependence and collectivistic nature of families (Hwang, 2003b). Familialism is defined as a “multifaceted system of cognitions, affects, intentions, and behaviours that are held in common by the Chinese” and encompasses themes of harmony, solidarity, prolongation of lineage, family prosperity and honour (Yang, 1996, p. 22). Yeh and Yang (1997) added that Familialism included a “set of values and their associated attitudes, beliefs, and behavioral norms that are family dominated in the sense that people holding these values adopt family as the basic social

unit, not the individual; they share common property with family members...” (p. 97-98). The inability to maintain harmonious relationships may cause great stress and depression in traditional individuals (Yang, 1996). For instance in Thai culture, the maintenance of harmonious relationships is prioritized, even if the expense is high (Komin, 1988). In agrarian societies, people were more reliant on one another in order to produce a successful crop, thus contributing to collectivistic tendencies and reliance on the family unit. The apriori factor, Familialism, assesses three aspects of the participant including commitment level towards his/her family, understanding and/or acknowledgment of hierarchical roles and values surrounding marriage.

Commitment

Asian families are often communal, indicating they share all their rewards as well as losses (Lu & Kuo, 2002). Members of the family are expected to orient themselves towards their family's needs rather than focus on their own needs (Yang, 1996). Familialism may cause people to deemphasize their personal goals and welfare for the sake of the solidarity of their family (Yeh & Yang, 1997). This high level of commitment is the first out of three aspects assessed in the Familialism scale.

In 1988, it was discovered that 78% of retired parents in Shanghai preferred to live separately from their children citing reasons such as financial independence and avoidance of family conflicts (C.F. Yang, 1988). Shanghai has also been noted to be one of the more modern cities in Asia (Chang et al., 2003), indicating the possibility of more individuation in modern society. Similarly, parental authority in urbanized areas of Taiwan were found to begin declining (C.F. Yang, 1988), which suggested that modernity may be correlated with the amount of authority and geographic commitment an individual is willing to abide.

Six questions are included in the constructed scale that assesses participant's level of commitment. The level of commitment includes participants' willingness to self-sacrifice their desires for the communal family unit. Additionally, the duration and amount of energy participants are willing to put into the family is measured. Finally, the geographic closeness one has with their family is assessed as a means to illustrate participants' physical solidarity and/or willingness to share property with their families.

Hierarchical Roles

The second aspect of Familialism measured is participants' understanding and allowance of family hierarchical roles. The concept of respect and obedience of certain family members, especially of the parents and male figureheads, are at the root of Asian cultures (Tripathi, 1988). Traditional South Asians tend to maintain values, such as obedience to elders and superiors, emphasis on family, sex role adherence and discouragement of autonomy in the younger and female family members (Patel et al., 1996). Yang (1996) noted that in traditional societies, the father of the family hold absolute power, whose decisions are never challenged.

Studies examining Chinese families have noticed that the behaviorisms of the family change throughout generations (Hwang, 2003b). The cultural idea of hierarchy and allocation of power has changed as notions of T-M change. For instance, the influential role of parental decision making power over their children about potential spouses and financial matters has declined with the rise of more modernistic values. Patel et al., (1996) noted that South Asian Indian immigrant parents are not as likely to adopt an authoritarian stance when raising their children in the U.S. versus their counterparts in India, who are more likely to abide by traditional values. Additionally, the boundaries of power and decision-making between older and younger family member are not as rigid with South Asian Indian families that have immigrated to the

U.S. Asian families also hold hierarchical beliefs according to one's gender. Patel et al., (1996) stated

“in traditional families, much socialization energy goes into preparing daughters to serve their future husbands and to help them adapt to life as a member of the husband's extended family. After marriage, women usually move to a village far from home, enter an environment that may sometimes be hostile to their presence and are expected to gradually reduce contact with their own family...” (p. 311).

Four statements on the scale designed to measure participants' adherence and understanding of traditional notions of hierarchical power in the family unit.

Marriage

Marriage is an important instrument for preservation of identity and values within one's culture (Talbani & Hasnali, 2000) and can maintain values, such as T-M (LaLonde, Hynie, Pannu & Tatla, 2004). For instance, if an individual believes maintaining one's traditional value system is important, then the individual is likely to look for a partner that reflects the same values. Traditional females are socialized to believe marriage is one of the most important goals in their lives, often placing education and career goals secondary in order to receive a marriage proposal and raise children (Talbani & Hasnali, 2000). For instance in Bahrain and Indonesia, women are not considered to be in middle adulthood until they have children (Patel et al., 1996). Traditional men are also raised to endorse similar beliefs of marriage and child-rearing behavior in women.

Marrying and raising a family is extremely important in traditional cultures (Eyetssemitan, Gire, Khaleefa & Satiardama, 2003). However, the notion of marriage differs between modernistic and traditionalistic values. In traditional cultures, marriage was based more upon a

companionate type of marriage rather than on love, which is a concept more emphasized in modernistic marriages (Schnaiberg, 1970). For instance, traditional marriages have often been arranged as a form of uniting different families and continue to be an important aspect of traditional culture (Talbani & Hasnali, 2000). Arranged marriages in South Asian cultures have been a “key instrument for economic, social and political stability”, “and have been used to make political alliances, solidify economic positions, and secure social stability among large families, tribes, and communities” (Talbani & Hasnali, 2000, p. 617). Furthermore, traditional notions of marriage solidify former family ties and ensure the continuance of lineage survival through the partnership of child-rearing.

Arranged marriages possess a collective and protection component. For instance, “If a group has strong collectivistic culture, than there are greater changes of arranged or early marriage” (Talbani & Hasnali, 2000). Furthermore, arranged marriages often help with the preservation of one’s cultural heritage. Marriage to someone considered outside one’s race and/or ethnicity is thought to threaten group identity whereas an arranged marriage is used to preserve identity and strengthen family ties. Historically, marriage outside one’s race and/or ethnicity was considered an action that only the academic “elite” engages in (p. 617). Overall, six statements assess participants’ values surrounding marriage and child-rearing behaviors.

Familialism is related to Yang’s (2007) Multiple Factors of Traditionality’s proposed factors of “filial piety and respect for the elders”, “relationship attitude”, Yang’s (2003) Individual Modernity Scale’s themes of “low integration with relatives” and Inkeles’ (1966) Overall Modernity Scale’s themes of “family behavior”, “birth control attitudes”, “kinship obligations”. Overall, this constructed scale measures three different aspects of Familialism, which are hierarchical roles, commitment and marriage.

Spirituality/ Religiosity

Smith and Inkeles' (1983) discovered that Spirituality/ Religiosity (S/R) has consistently shown a negative correlation to modernity. Patel et al., (1996) noted that traditional family values in South Asians emphasize S/R, thus contributing to the theory that there may be a positive relationship between S/R and T-M. To supply further evidence, Inglehart and Baker (2000) used the World Values Survey with 65 different countries and analyzed the foremost values indicated by more traditional countries. They discovered the value with the highest correlation with traditional countries was religiosity.

Societies emphasize less on S/R once the economy and political atmosphere has stabilized (Inglehart & Baker, 2000). Part of the reason more traditional societies possess a stronger element of S/R is the security and faith associated with S/R that can relieve individuals during times of turmoil, such as political and economical unrest. Organized religion begins to decline as societies modernize and stabilize and the sense of security increases. When societies stabilize, people begin to feel more secure and comfortable enough to seek their own spiritual pathways (Inglehart & Baker, 2000). In addition to the stabilization of societies, the shift from agrarian to industrial societies also play a part in S/R. According to the World Values Survey (2000), as industrialization increases, the importance of organized religion decreases and is replaced by individuals seeking spiritual/ religiousity involvement. Schnaiberg (1970) added that while the decline of adherence to specific religious is seen in more industrialized and modernized societies, involvement of S/R as a means of social organization increases.

Furthermore, geographical differences within societies also contribute to the importance of adhering to S/R values. A study of 2,469 people in Thailand from both rural and urban regions indicated that the two most important values for urban Thai was family and success while the

two most important values for rural Thai was national security and S/R (Komin, 1988). Studies have replicated that individuals living in rural China are more likely to endorse traditionalistic beliefs whereas Chinese people residing in urban areas are more likely to endorse modernistic beliefs (Zhang et al., 2003).

However, the significance of S/Rs' relationship to T-M remains debatable. Eyetsemitan et al., (2003) claimed that no matter how modernized one's beliefs may be, South Asian populations will continue to believe that one can be hurt if one disobeys or angers the dead. The researchers continued with noting that in South Asian populations, worship of the dead is associated with respect paid to the elderly. The traditional belief is that the elderly's wisdom in indigenous S/R matters continues the faith of the spirit world. Because traditional culture often endorses belief of spirits, supernatural forces and fortune-telling (Eyetsemitan et al., 2003), a question was added to assess participants' values surrounding these indigenous beliefs. Arguably, the significance of worshipping one's deceased ancestors continues to be the perseverance of traditional beliefs, although Eyetsemitan et al., (2003) claim that S/R is not impacted by one's T-M value system. Six statements are included to observe the adherence and commitment level of participants' S/R.

No eastern scales appear to provide a S/R factor. The only scale deemed to possess a factor similar to the proposed S/R factor is Schnaiberg's (1970) Modernity Scale, which included a "religiosity" theme. Overall, the S/R scale measures participants' adherence to S/R practices reflective of one's ancestral culture(s) as well as participants' understanding and belief in fatalism.

Gender Beliefs

Traditional socialization processes espouse gender differentiated values. From an early age, boys are encouraged to do well in school in order to find a job to finance his future family while girls are taught to complete household work and take care of her future family (Eyetsemitan et al., 2003). For instance, boys learn that they hold more power than girls and are allowed to be more vocal whereas girls are taught to be submissive. As they mature, traditional women learn to define their identity in terms of their family and place her needs after her husband and children whereas men become the head of the household.

Research has consistently shown that traditional values are correlated with sexist beliefs whereas modern values reflects more egalitarian attitudes (Leong & Chang, 2003). For example, a study measuring Chinese student's attitudes from urban versus rural China discovered that males held more traditional notions of gender beliefs than their female counterparts (Zhang et al., 2003). Males endorsed less values of gender equality and were more content with current social standards whereas female students endorsed more values of gender equality and advocated for more change in social standards. When taking into consideration the geographic location, urban Chinese males scored less on traditionality and higher on modernity than males from rural areas of China. Similarly, urban women scored higher on modernity than their rural counterparts. Overall, the study demonstrated that women endorsed more modernistic views on gender roles.

These results were replicated by Pek and Leong (2003) with the adult population in Singapore. Pek and Leong (2003) conducted a study on T-M and sexist values. Using the MS-CIT and MS-CIM, their research discovered that higher endorsement of traditionality significantly predicted sexism. Furthermore, those who scored higher on modernity placed more emphasis on egalitarianism and sex equality. Sexist beliefs were not significantly endorsed by

participants who scored higher on modernity. However, Pek and Leong (2003) concluded that modernity is unrelated to sexist attitudes but traditionality predicted sexist attitudes.

Traditional values denote females as the more vulnerable gender (Talbani & Hasanali, 2000). Notably, traditional families raise girls in a “far more protected, controlled and sheltered home settings when compared to the majority of adolescents...” (p. 617). These values are instilled in females at a young age and carry through adulthood. As an example, the definition of happiness for a traditional Asian Indian adult female is to be protected by a male. Similarly, traditional women and men learn to socialize within their own gender to keep a clear delineation of gender roles. The scale includes six statements examining participants’ values regarding gender roles:

Gender Beliefs is related to Yang’s (2007) Multiple Factors of Traditionality’s proposed factors of “male superiority”, Yang’s (2003) Individual Modernity Scale’s themes of “egalitarian attitudes”, “belief in sex equality” and Inkeles’ (1966) Overall Modernity Scale themes of “women’s rights” and “co-ed work and school”. Overall, this hypothesized factor measures participants’ influence/aspirations, responsibilities and socialization practices associated with their identified gender.

Emotional Regulation

The Emotional Regulation a priori factor includes two components: coping and loss of face. Coping represents “adjustment to the demands, threats or challenges of a situation which is appraised as stressful” (Hardie, Critchley & Morris, 2006, p. 225). Wong and Tran (2010) noted

“...scholars have speculated that Asians’ and Asian Americans’ coping strategies... include the collectivistic notion that one should adjust one’s feelings to fit one’s environment to preserve social harmony, the importance of accepting rather than

confronting one's problems, and the need to save face by not disclosing one's problems to others" (p. 1).

Although there is no known research specifically indicating the relationship between coping and T-M, cross-cultural research suggests western cultures prefer direct coping styles whereas collectivistic eastern cultures prefer indirect coping styles, or suppression of emotions (Saw & Okazaki, 2010). Similarly, western cultures emphasize direct help-seeking behavior, such as using one's social support system and/ or attending therapy, whereas eastern cultures emphasize this less (Choi, Rogers & Werth, 2009; Wong & Tran, 2010). Indirect methodologies of coping are to rely less on social and institutional support and more on avoidance and social withdrawal (Wong & Tran, 2010).

Literature has long noted that help-seeking behavior are low among AAPI (Choi et al., 2009; Kim & Omizo, 2003), which has been speculated to be the result of cultural mistrust (David, 2010). However, help-seeking behavior has been noted to be stronger with AAPI that are more assimilated to U.S. norms, indicating a strong likelihood that help-seeking behavior is correlated with modernity. Like coping styles, help-seeking behavior does not have any known literature of its relationship with T-M. However what is known is that AAPI are less likely to seek outside help if there is the possibility of shaming one's own image or one's family (David, 2010). Therefore one might limit one's help-seeking behavior to within the family in order to save face.

Another aspect of coping is more related to the idea of holism. Chinese traditional ideas include the body-spirit theory, which states that the body is a function of the spirit world and vice versa (Fang, 1988). In South Asian Indian culture, elaborate rituals are related to worship of the

ponds, wells, rivers, tress, wind, sky and fire (Tripathi, 1988, p. 317). Therefore, five statements were included on the scale to assess the relationship between coping and T-M.

Loss of Face.

Face and loss of face is an Asian socialization phenomena, where one's face is understood as one's reputation, as deemed by other people (Zane & Yeh, 2002) and causes individuals to closely observe set norms (Pareek, 1988). According to Yang (1996), "A good reputation makes a Chinese feel that he or she has *mianzi* ('face'), and is someone with good social status. One's value in the family is mainly determined by how well one has performed intra-family roles; one's value in society is mainly determined by one's overall reputation outside the family" (p. 36). It has been discovered that part of maintaining one's image is controlling or hiding one's emotions to avoid stigma (Zane & Yeh, 2002). As a different example, it is important for Thai individuals to not lose face or cause loss of face to another person (Pareek, 1988). A Thai individual may avoid confrontation or agree to undesirable decisions in order to maintain harmony and save face.

When an individual loses face, the individual's family is also likely to experience embarrassment and shame that is normally accompanied by loss of face (Hwang, 2006). Face is a powerful construct that can lead a person to suicide in the worst cases (Ho, 1976). As a result, people learn to maintain their public self although it may greatly differ from their private self (Yang, 1996). The extent of how an individual may maintain one's face can be acute enough to where the individual holds two different dialogues with two different personas.

Not much research has been conducted on loss of face and its relationship with T-M. One study showed that AAPIs born outside the U.S. placed more emphasis on face than their U.S. born counterparts, indicating a degree of acculturation associated with face (Kim et al., 2001). As

mentioned earlier in Chapter Two, a likely correlation between acculturation and modernity has been found in South Asian Indian families who have immigrated to the U.S. (Patel et al., 1996). In a different study, Chang et al. (2003) found that younger and better educated Singaporeans were less likely to emphasize ‘face’ in everyday situations, believing that face is no longer a socialization process vital to carrying oneself in public. Hence, it can be concluded indirectly that face is more so a reflection of traditional value than a modern value. Overall, the Emotional Regulation a prior factor assesses participants’ coping strategies as well as understanding and presence of loss of face.

Cultural Maintenance

As of date, questions similar to cultural adherence have been used in some T-M scales, although a factor has not been discovered. Involvement in the social and cultural practices of one’s ethnic group is the most widely used indicator of ethnic identity (Talbani & Hasanali, 2000). Cultural Maintenance (CM) is defined in this project as including pride in one’s ethnic identity, usage of language, socialization practices as well as understanding and adherence to cultural traditions. CM is maintained through consistent contact and access to one’s heritage culture, such as exposure to music, movies, television and stage shows as well as whom one socializes. CM is also further indicated through their knowledge of one’s own cultural history (Talbani & Hasanali, 2000).

Everyday socialization practices are an important means of transferring values and behaviors from one generation to the next (Kao & Hong, 1988). Parents tend to influence socialization practices such as with whom children prefer to socialize with and what activities they participate in (Talbani & Hasanali, 2000). The authors noted that “the signs of change in traditional power or family structure could be witnessed in various forms such as adolescents’

changing dress code, less participation in community activities and increasing dissent” (p. 621). This qualitative study further indicated that second-generation adolescents stated they often “feel different” from their parents and “feel more comfortable wearing ‘Western clothes’”. The results concluded that immigration status has a connection with the change of values from one generation to the next. Therefore a component of CM assesses the socialization process and general preference of everyday activities.

Choice of language also plays a factor in CM. In their construction of the Singapore Chinese Values Scale, Chang et al. (2003) used one of the markers of modernity as language preference. Chang et al. (2003) discovered in their study of T-M values that Singaporeans who preferred to use English more than Chinese also endorsed more modernistic values than Singaporeans that preferred to use Chinese more frequently. The authors discovered that using the Chinese language helped participants in the study to attain and uphold traditional values. They stated “preference for using the Chinese language perhaps reflected more immersion in Chinese family and public culture, such as Chinese television programs and newspapers, which led to higher enculturation to the traditional values” (Chang et al, 2003, p. 20).

Another aspect of CM is the notion of patriotism, as was noted in Doob’s (1967) Modernity Scale. It can be indirectly concluded that the two constructs may hold some sort of positive correlation due to traditionality’s inherent definition of preservation and adherence of temporally older established beliefs. Patriotism is defined by Tsai et al. (2002) as the importance of expressing pride for one’s country (p. 259). Inglehart & Baker (2000) noted “people of traditional societies often have high levels of national pride, favor more respect for authority, take protectionist attitudes toward foreign trade, and feel that environmental problems can be solved without international agreements, they accept national authority passively...” (p. 25). The

questions that assess a patriotic aspect include observation, understanding and ride in one's ancestral culture.

Summary

Chapter Two discussed the theoretical paradigm that will be utilized in this project and reviewed the evolution of T-M's definitions as viewed from both the western and eastern perspective. The most popularly researched T-M measurement instruments were also examined. Additionally, Chapter Two included a section on terms that are often erroneously associated with T-M and introduced the five hypothesized factors in the constructed scale. The next chapter, Chapter Three, will discuss the scale construction methodology, intended populations and statistical treatment that will be utilized in this project.

CHAPTER 3

METHODOLOGY

Introduction

Chapter Three includes a discussion of the scale design, item selection and construction, data collection methodology, demographic information concerning the participants and rationale for the statistical procedures used to analyze the results. Each sub-section contains descriptions of its implementation and limitations.

Research Design

A unidimensional scale was constructed for a cross-sectional survey research design. The researcher chose to utilize a unique scale in order to measure the value system of Asian American/ Pacific Islanders (AAPI) in terms of traditionality and modernity (T-M). Scale construction was chosen as a relatively inexpensive means of collecting data which ensures confidentiality to participants. Furthermore, current T-M theories and scale design have been vague. According to DeVellis (2003), if existing theories are conflicting and/ or incomprehensive, then an informed decision to create new conceptual formulations may occur. He further noted that when the circumstances arise, a new “tentative theoretical model” and/or a “well-formulated definition of the phenomenon they seek to measure” can be produced (p. 60). Chapters One and Two detailed the conceptualization process of T-M and noted a new working definition used for purposes of this project.

DeVellis (2003) suggested that the first process in creating a scale is to define the variables under examination. The definition of the variables to be examined must be well defined

and empirically sound in order to engage in a sound scale construction process (Dawis, 1987; DeVellis, 2003; Worthington & Whittaker, 2006). According to Worthington and Whittaker (2006), “Nothing is more difficult to measure than an ill-defined construct because it leads to the inclusion of items that may be only peripherally related to the construct of interest or to the exclusion of items that are important components of the content domain” (p. 813). DeVellis (2003) added that, “The boundaries of this phenomenon must be recognized so that the content of the scale does not inadvertently drift into unintended domains” (p. 60). Chapter One documented both sides of the debate on whether T-M exists as unidimensional or multidimensional constructs. Table 3.1 illustrates the theory of unidimensionality, which was utilized in the scale design. As noted in Chapter One, a unidimensional scale was chosen rather than a multidimensional scale because of the following reasons:

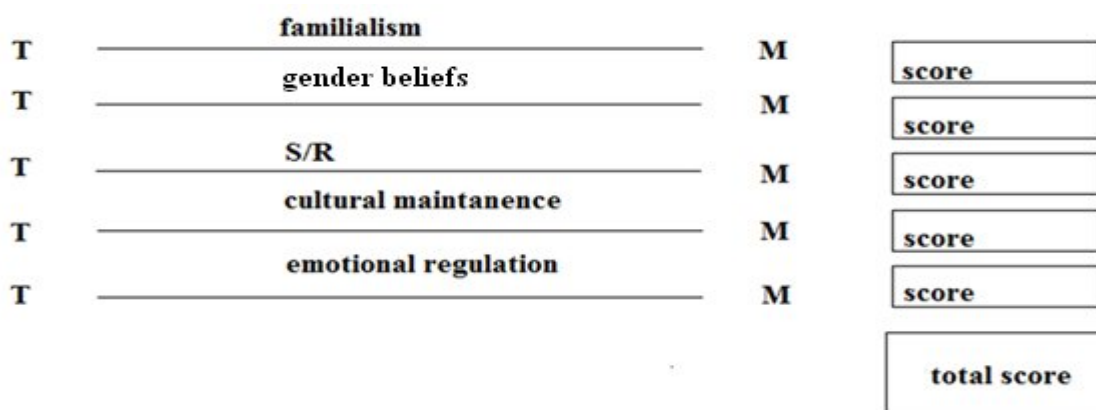
1. According to Dawis (1987), a strong theory of construct must be used when beginning scale development. Although the evidence on both unidimensionality and multidimensionality remain unsettled, a review of the literature provides more unidimensional scales than multidimensional scales. From the viewpoint of the empirical paradigm, sufficient evidence has not been discovered by the author to warrant a multidimensional scale structure.
2. Although Yang’s research currently documents utilizing a multidimensional viewpoint, his research has been conducted in a different population (i.e. Asians) versus the intended population for this project, which is Asian-Americans/ Pacific Islanders (AAPI). Therefore, the multidimensional view may not generalize to a different population. Instead, a conservative stance will be employed with the unidimensional scale. However, this is not to declare that T-M may not be multidimensional. Several initially believed

unidimensional constructs moved towards a multidimensional structure, such as acculturation, femininity and masculinity as well as positive versus negative affectivity (Miller, 2007).

3. Yang's current research will also be represented in this project because the notion of the empirical paradigm, which was discussed in Chapter Two, will be the theoretical framework of choice for this project.

Figure 3.1

Hypothesized Unidimensional Model with Six Total Scores



Each of the suggested five hypothesized factors consists of individual scales (i.e. Familialism, Gender Beliefs, Spirituality/ Religiosity, Cultural Maintenance and Emotional Regulation) which produce an individual score. All five scores will be averaged overall to acquire the participant's total score, or overall traditionality and modernity (T-M) score, with lower overall scores indicating higher modernity and higher overall scores indicating stronger traditionality. It should be noted that Gender Beliefs is reverse scored. Thus, each participant will receive six scores overall.

Pool of Items.

After delineating the conceptualization process of T-M, the second critical step in scale development is generating a large comprehensive pool of items (DeVellis, 2003; Worthington & Whittaker, 2006). The pool of items is used as a means to methodologically eliminate unnecessary, poorly constructed or ambiguous items until a final set of items is determined that accurately represents the constructs under measurement (Worthington and Whittaker, 2006). A pool of items was generated based on an extensive literature review, solicited feedback from researchers familiar with T-M as well as conference presentations from the previous three years.

DeVellis (2003) noted that the pool of items can contain as much as three or four times the amount of questions that will be included on the finalized scale. However, he further added that the pool of items can be approximately half of the scale items used on the finalized scale if the content area is particularly difficult to generate questions. The pool of items is also recommended to include both positively and negatively worded items as well as redundant items to aid the item generating process. One hundred twenty two items were included in the pool of items. Items were generated using feedback from conferences, colleagues, researchers in the field as well as extensive literature reviews.

Conference presentations included a 2009 roundtable presentation at the Southeastern Regional Counseling Psychology Conference: Counseling Psychology in the 21st Century: Social Justice, Practice, and Research in Athens, GA and a 2008 poster presentation at The Cultural Competency Conference in Atlanta, Georgia. Both presentations concentrated on the conceptualization process of T-M and asked for participants to provide general feedback on scale items and definitions. Additionally, a symposium was conducted on measurement difficulties in Asian American/ Pacific Islander (AAPI) populations at the Association for Assessment in

Counseling and Education National Conference in Atlanta, Georgia in 2007 with a focus on culturally appropriate methodologies to measure the AAPI population. This symposium also discussed culturally appropriate assessment tools and methodologies when measuring the AAPI population.

Format of Scale.

After the pool of items has been developed, the next step in scale construction is determining the format of the scale (DeVellis, 2003). The Likert method is the most commonly employed techniques for subject-centered scale methodology (Dawis, 1987). Likewise, DeVellis (2003) reported that the Likert scale is one of the most widely chosen methods for measuring people's opinions, beliefs and attitudes. Thus, a Likert scale format was deemed the most appropriate method of measurement.

After choosing the Likert Scale, the next step in the scale construction process included determining the number of responses participants will use when responding to scale items. An odd number of responses on the Likert scale allows participants to endorse neutral response (i.e. "neither agree or disagree" or "agree and disagree equally") whereas an even number asks participants to endorse a more value laden response or attitude (DeVellis, 2003). Neutral responses can provide "unwanted equivocation" but may also be crucial, depending on the constructs under investigation (p.77). DeVellis (2003) further discussed that the most common practice is to include six possible responses to give participants the opportunity to clarify their opinions, beliefs and attitudes. Because this project aims to clarify T-M, a six-point Likert scale was chosen in order to avoid complete neutral responses as a means to better elucidate participants' values. The six responses include "Strongly Disagree", "Moderately Disagree",

“Mildly Disagree”, “Mildly Agree”, “Moderately Agree” and “Strongly Agree”. See table 3.2 for the scale response format.

Figure 3.2

Example of Likert Scale

I believe women have as much power influencing politics as men.

Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
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Development of Scale Items.

According to DeVellis (2003), clarity is most important when determining quality items on the scale. Items should be written as “clear, concise, readable, distinct” because any “items that are poorly worded or not central to a clearly articulated construct will introduce potential sources of error variance, reducing the strength of correlations among items, and will diminish the overall objectives of scale development” (Worthington & Whittaker, 2006, p. 813). After items are generated, they can be evaluated for clarity of expression, including reference to the constructs under examination, wording, grammar and conciseness (DeVellis, 2003).

Items such as “I feel embarrassed and/ or ashamed when strangers approach me” and “Mass media holds much authority and guidance over my decisions” were dropped due to vague construct references. Wordy scale items such as were dropped. Items with double-barreled meanings such as “I believe confrontation and directedness is an effective method to deal with people” and “It is easy for me to change and adapt to new friends” were not chosen to further the clarity and conciseness of scale items.

DeVellis (2003) also recommended that all scale items and concepts be written at the fifth to seventh grade levels. Therefore items such as “Interdependence is more important than

independence” were discarded in order to conform to the rule. Additionally other items, such as “Emotions should be restricted, especially in public” were changed to “Emotions should be hidden, especially in public”.

Other scale items were modified to clarify the conveyed ideas. For example, “The husband should speak for the family” was changed to “The husband should be the only one who makes important decisions for the family” and “It is expected for me to provide money for and take care of my parents in the future” was changed to “My parents will live with me when they get older”.

Nine hypothesized themes were chosen for the T-M scale from the pool of items, which included Familialism, Gender Beliefs, Spirituality/ Religiosity, Societalism, Future Aspirations, Obedience/ Decision-making process, Career Aspirations, Mannerism, Health Attitudes and Emotional Regulation. Seventy-five items from the pool of items were initially selected to be reviewed by the panel of experts.

Panel of Experts.

Worthington and Whittaker (2006) noted that “Having the items reviewed by one or more groups of knowledgeable people (experts) to assess item quality on a number of different dimensions is another critical step in the process” (p. 814). A panel can confirm or invalidate one’s theory and conceptualization as well as test the rigors of the scale items (DeVellis, 2003). The panel of experts (POE) was solicited using rigorous means, including contacting academic and psychological organizations’ listservers as well as personal emails to researchers who have previously had experience with either scale development and/ or research involving T-M. Six researchers volunteered to serve on the POE, including four professors and two graduate students. All professors were external to the researcher’s core department. Two of the professors

have full professorship, including one international researcher who has published in the area of T-M, and one well-published professor who is part of the researcher's department. The other two professors are assistant professors on the tenure track with research expertise in either T-M and/or scale development. Both graduate students are part of the researcher's department and have helped the researcher present and develop various stages of the instrument being studied.

The POE can be immensely useful for determining any redundant, awkward and unclear constructs or scale items (DeVellis, 2003). At minimum, any expert review of items should include content and face validity analysis (Worthington & Whittaker, 2006). After the POE was formed, instructions were sent to each member asking them to critique the clarity, accuracy, relevancy and appropriateness of the items and factors. The POE was also asked to assess the reading level appropriateness and redundancy of items. Finally, instructions were sent for the POE to include any essential variables or items that they believe were overlooked on the T-M scale. The scale was sent to the POE and included the general working definition of T-M and brief literature review of the origins of each proposed factor. The POE rated each item on a five-point Likert scale, indicating how relevant they felt each item was to T-M.

Five out of six members on the POE returned their critique of the scale. Feedback was generally positive and receptive of the scale. Feedback was calculated per factor and scale item through percentage of responses chosen by the POE using the five-point Likert scale. Based on feedback from the POE, approximately 18 items were added and/or reworded and 22 were discarded and prepared for the second POE.

One of the strongest feedback by the first POE included the usage of the phrase "ethni(cities) of origin" when referring to participant's cultural background. The term "ancestral

culture” replaced “ethni(cities) of origin” after the latter term was deemed by the POE as excessively wordy, confusing and awkward.

The Societalism and Obedience/ Decision-making scale had the lowest percentages. Feedback from the POE indicated Societalism and the Obedience/ Decision-making factors to be an ambiguous reference to the T-M constructs. On closer analysis, the relationship between Obedience and Decision-Making was poorly conceptualized and questions from this hypothesized factor were either deleted or moved to other themes, such as Familialism, Future Aspirations and Gender Beliefs. Analysis of POE feedback also determined a different variable, which was named “Moderation”. The Societalism scale was revised and submitted to the second POE to further assess its applicability.

A second POE was chosen after incorporating the responses from the first panel of experts. The second panel included one graduate student and one professor of psychology. Similar instructions were given with 77 scale items and nine hypothesized factors. The second POE instructions also included the current working definition as conceptualized by the author as well as all modified factors. To further clarify vague factors, the Mannerism scale was renamed “Cultural Adherence”.

The nine hypothesized themes were modified after the first POE feedback. The nine themes submitted to the second POE included Spirituality/Religiosity, Moderation, Health Attitudes, Emotional Regulation, Familialism, Gender Beliefs and Cultural Maintenance, Cultural Adherence, Motivation. As mentioned previously, “Moderation” replaced the “Obedience/ Decision-making process” scale. The Cultural Maintenance and Cultural Adherence scales were combined because they were deemed to be similar in nature.

Final Items Selection.

Although it is recommended that items be minimized in order to keep the scale length as short as possible (DeVellis, 2003; Worthington & Whittaker, 2006), scale development studies may include items up to three or four times the size before the finalized scale is complete (Worthington & Whittaker, 2006). Based on the literature review and feedback solicited by both panel of experts, the scale length was determined to encompass 46 items with five hypothesized themes: Familialism, Gender Beliefs, Spirituality/Religiosity, Cultural Maintenance and Emotional Regulation.

According to Yin (2003), the notion of moderate beliefs, hard work and fatalism originated with Confucian values. The Moderation scale was discarded after the second POE's feedback generally discussed the limitations of Moderation's generalizability and applicability for AAPI populations without a strong Confucian background. With feedback taken into consideration from the second POE's feedback as well as the first POE's feedback, the Moderation scale was subsequently dropped due to poor applicability as well as ambiguous reference to T-M. Furthermore, questions related to fatalism were dropped in the S/R scale to better define S/R's measurement criteria.

The Societalism scale was also dropped after feedback solicited by the second POE confirmed its ambiguous and unclear reference to T-M. The Societalism scale was derived from many past T-M scales used to measure ones change and flexibility in societal changes. However, feedback from both POEs indicated the Societalism scale may be measuring a different construct that was not necessarily related to T-M but more a measure of societal flexibility rather than individual flexibility.

The final scale to be dropped was the Health Attitudes scale. The Health Attitudes scale was deemed too broad because it encompassed the Emotional Regulation scale in addition to other themes. The questions on the Health Attitudes scale were moved to the Emotional Regulation and Cultural Maintenance scale due to overlap of thematic structures.

Validation Items.

According to DeVellis (2003), inclusion of validation items can help determine the validation of the scale. One important issue is discovering the intent behind participants taking the scale and whether they are answering truthfully or randomly. As a means to control random responses, the gender scale will be reverse scored. All Familialism, S/R and CM items will be scored with more traditional values correlating with “strongly agree” (i.e. higher scores indicate stronger traditionality). ER items will follow the same procedure with the exception of one question, “I prefer to directly confront my problems rather than accept them”, which will be reverse scored. Gender Beliefs will be reverse scored with more modernistic values correlated with “strongly agree” with the exception of two items: “I believe men should provide the main financial support for the family” and “I feel more comfortable when I am in the company of the same gender”.

Measures

This project will only utilize the scale designed by the author. Worthington and Whittaker (2006) noted that adding more scales to the instrument currently under investigation is contraindicated because the instrument’s length may influence participants’ willingness to volunteer or complete the entire instrument in addition to the possibility that adding any additional scales may influence participants’ responses when completing a novel instrument, which will interfere with response validity. The ability to control for any possible response

interference from additional instruments would be difficult to control in a novel instrument. Thus in order to maintain the clarity and preciseness of the scale development process, other instruments were not selected for the purpose of this research design. However, future studies may include other instruments to further determine the scale's validity and reliability.

Intended Populations

The scale is intended for any self-identified Asian American/ Pacific Islanders (AAPI) and will utilize a similar procedure conducted by the United States (U.S.) Census from 2000 when determining who qualifies to participate in the study. Although the census utilizes the term "Asian" rather than "AAPI", the two will be construed as the same for the purposes of this study.

The U.S. Census (2002) states that "The term 'Asian' refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent (for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam)" (p. 1). For purposes of this study, any participant who self identifies as "Asian" or "Other Pacific Islander" on the census and resides in the United States will be deemed qualified to participate. Any persons indicating that he or she as having other racial heritage, but which also includes Asian, is also deemed appropriate for the study.

According to the U.S. Census Bureau (2002), Asians and AAPI constitute approximately 4.6 percent of the U.S. population. Approximately 10 million people, or 3.6 percent, identify as "Asian" and an additional 1.7 million people reported "Asian" as part of their heritage. From 1990 to 2000, the total population of AAPI increased by 13 percent. The 248.7 million Asians and AAPI increased in 1990 to 281.4 million in 2000 and is expected to increase markedly higher in the 2010 census. Twenty Seven percent of the U.S.'s foreign-born population consisted

of identified AAPI. Foreign-born Asians comprise 69% of all AAPI in the U.S. Nearly fourth-fifths of Asians in the U.S. primarily speak a language other than English at home.

It is important to note that on the 2000 U.S. Census, the median age of the respondents for the AAPI population was 35.3 years. Whether or not this implies the willingness of certain demographics of AAPI to participate in studies or the age range of those residing in the U.S. will be considered when data is analyzed.

Demographic Form.

The demographic form will be included with the scale. The demographic form provides anonymity and serves to help identify participants qualified to participate in the study. The demographic form asks participants to identify how long they have resided in the U.S. and when their family immigrated to the U.S. Any responses that do not fall under the category “Asian American” will not be included in the data pool.

The demographic form also provides further insight on certain facets of T-M but was not deemed appropriate to a Likert Scale format. For instance, the form asks for participants to identify their educational level and age. According to a study conducted by Zhang et al. (2003), modernity tends to increase with educational level attainment and decrease with younger generations. Educational level attainment was discovered to be the strongest predictor of modernity. As a result, the demographic form also includes a question asking participants to identify their educational background. Finally, the data provided on the demographic form will gather information about participants’ gender, ethnicity/ country of ancestral origin, age, marital status, income level per year, religious/ spiritual affiliation, immigration status of participant, immigration status of participants’ parents and grandparents as well as the frequency that the participant travels back to his/her country of ancestral origin.

Population Size.

Scale development requires large samples of participants because large numbers of participants likely cancels out random or erratic responses (DeVellis, 2003; Worthington & Whittaker, 2006). Many opinions exist on how many numbers of participants are adequate for the scale development process. In general, 50 participants are considered “very poor” and 1,000 considered “excellent” (Worthington & Whittaker, 2006, p. 817). It is recommended that scales have at least 300 participants and is unrelated to the final number of items on the scale. Another recommendation is for scales to have a minimum ratio for participants to items is 5:1 or 10:1, which is popularly used in Counseling Psychology research. However, exceptions can be made with sample sizes as little as 150 or 200 if factors load at .4 or contain communalities higher than .50. Small data sets can also be adequate if data analysis shows communalities are at .60 or higher with at least a 4:1 ratio. Anything less than a 3:1 ratio and/or a sample size less than 100 is generally deemed as inadequate. For purposes of this study, the researcher aimed to recruit a minimum of 250 participants to satisfy minimum requirements for data analysis using a EFA.

Data Collection Procedures.

Data collection began after the University of Georgia Institutional Review Board (IRB) approved the study on February 22, 2011. Convenience sampling was the primary method of gathering data during the initial three months of data gathering. An online database was utilized for participants to take the scale online. Paper copies were also sent out to participants who contacted the researcher and preferred to mail it back. Over 100 colleges as well as local, regional and national organizations affiliated with the advancement of AAPI and/ or mental health issues were contacted via email for recruitment purposes. Flyers and cards with information concerning the study were placed in key areas with heavy AAPI traffic in Atlanta,

Georgia and Athens, Georgia as well as on three large college campuses in Georgia. Word of mouth was also spread throughout the AAPI community in Atlanta to aid with recruitment of populations that could not be reached via email or flyers.

After approximately 300 participants were recruited, the researcher analyzed the demographic distribution using Statistical Package for the Social Sciences (SPSS) version 19.0. Sampling became purposive after the researcher discovered several underrepresented age groups and ethnicities. According to the meta-analysis of scale development studies in Counseling Psychology, Worthington and Whittaker (2006) discovered that some form of purposive sampling was the most common form of recruiting participants in order to better represent certain demographics. During the final two months of gathering data, the researcher began recruiting at a local Buddhist temple, Dharma Jewel Monastery, in Atlanta, Georgia. The scale was translated and back-translated into Chinese to recruit more elder participants and southeastern Asian participants. Furthermore, the researcher posted on listservers, blogs, and contacted organizations devoted to serving Pacific Islanders and southeastern Asian Americans in order to more properly represent the AAPI population. More brochures were circulated about the study in areas with heavier traffic aimed at these two general populations. Data recruitment officially ended on May 24, 2011 after an EFA revealed communalities greater than .50 and factor loadings greater than .40, which has been written by Worthington and Whittaker (2006) as an appropriate time to halt recruiting.

Demographic Data

394 participants' data were analyzed after approximately 35 participants' data were thrown out when validity items were examined. Descriptive frequencies were analyzed on SPSS with various demographic data, including gender, ethnicity/ country of ancestral origin, age,

marital status, income level per year, education level last completed, religious/ spiritual affiliation, immigration status of participant, immigration status of participants' parents and grandparents as well as the frequency that the participant travels back to his/her country of ancestral origin.

Gender and Ethnicity/ Country of Ancestral Origin

According to the descriptive frequencies of the data collected, 58.1% (n=229) were female participants and 41.9% (n=165) were male participants. Participants identified 26 different ethnic categories of ancestral origin. Due to the distribution of the ethnicities in this sample, the researcher categorized several of the represented ethnicities into larger groups based on their geographic regions (see Table 3.1). The “Oceanian” category includes participants who identified as Guamanian (n=2), Samoan (n=2), Indonesian (n=1), Tongan (n=1), Hawaiian (n=1), Micronesian (n=1) and Fijian (n=1). The “Mainland Southeast Asian” category includes Thai (n=1), Mien (n=1), Singaporean (n=1), Cambodian (n=4) and Laotian (n=2).

Table 3.1

Participants' Ancestral Origin/ Ethnicity

<u>Ethnicity</u>	<u>Frequency</u>	<u>Percent</u>
Chinese	135	34.3
Indian	92	23.4
Taiwanese	44	11.2
Korean	25	6.3
Filipino	21	5.3
Vietnamese	14	3.6
Other	12	3.0
Oceanian (Micronesia)	9	2.2
Japanese	8	2.0
Asian-Asian Mix	7	1.8
Asian-Caucasian Mix	7	1.8
Sri Lankan	5	1.3
Mainland Southeast Asian (Indochina)	5	1.3
Cambodian	4	1.0
Pakistani	3	.8
Nepalese	2	.5
Hong Kong	1	.3

Participants who identified themselves as Chinese (n=135) were the largest category representing 34.3% of participants. It should be noted that participants in this study interchanged the term “Chinese” and “Taiwanese” in numerous cases. Therefore, the statistics regarding these groups should be interpreted with caution. Seven different ethnicities (Chinese, Indian, Taiwanese, Korean, Filipino, Vietnamese, Japanese) constituted approximately 86% of the participants (n= 351), thus limiting generalizability of the results to all AAPI populations, which will be further discussed in Chapter 5.

Participants in the “Other” category indicated either Asian American or Pacific Islander when asked for their ethnicity. Participants in the “Asian-Asian Mix” category included participants that identified as Japanese-Hawaiian (n=1), Chinese-Cambodian (n=1), Chinese-Singaporean (n=1), Vietnamese-Chinese (n=1), Hawaiian-Filipino (n=1) and Chinese-Japanese

(n=1). Participants in the “Asian-Caucasian Mix” category identified themselves as Vietnamese (n=1), Japanese (n=1), Indonesian (n=1), Filipino (n=2), Korean (n=2) and Chinese (n=1) as the AAPI side of their identity.

Age

The age of participants ranged from 18 to 80 years old with a mean of 32.96 years and standard deviation of 13.47 years. Table 3.2 depicts a stem-and-leaf plot of the break-down of the age of participants.

Table 3.2

Stem-and-Leaf Plot Depicting Participants’ Ages

Frequency	Stem & Leaf
34.00	1 . 8888888999999999
103.00	2 . 0000000011111111*22222222*333333333333444444444444*
77.00	2 . 555555555566666666777777778888899999*
75.00	3 . 000011111111*22222333334*55566*77*888*99999
34.00	4 . 0011*222*34555*6*77889
49.00	5 . 000*111*222*33*44445556667788*99
13.00	6 . 00*11*2356*7*8
2.00	7 . 0*6*
1.00	8 . 0*
3.00	Missing Value

Each leaf indicates 2 cases

1 case is denoted by leaf followed by *

Religiosity/Spirituality

Participants identified 29 different religions/ spiritual beliefs as depicted in Table 3.5.

The majority of participants indicated they were unaffiliated/ non-specified with any denomination at 22.3% (n=88) followed by non-denominational Christians at 17.8% (n=70). For classification purposes, Protestantism encompasses 8 different religions including Lutheran (n=1), Protestant (n=5), Presbyterian (n=1), Baptist (n=3), Mormon (n=2), Episcopalian (n=1),

Methodist (n=2) and Evangelical (n=1). Catholic (n= 26) and Roman Catholic (n=3) were also categorized together. “Blend of eastern religions” encompasses Buddhist/ Daoist blend (n=2) and Hindu/ Buddhist Blend (n=2). Table 3.3 illustrates the religions/ spiritual preferences of the participants.

Table 3.3

Participants’ Religions/ Spiritual Preferences

<u>Religion/ Spiritual Preference</u>	<u>Frequency</u>	<u>Percent</u>
Unaffiliated/ None Specified	88	22.3
Non-denominational Christian	70	17.8
Hinduism	60	15.2
Buddhism	57	14.5
Catholicism	29	7.2
Agnostic/ Spiritual	24	6.1
Atheist	23	5.8
Protestantism	16	4.0
Islamic	10	2.5
Blend of eastern religions	4	1.0
Sikh	3	.8
Jewish	1	.3
Russian Orthodox	1	.3
Daoist	1	.3
Jehovah’s Witness	1	.3
Druid	1	.3
Seventh Day Adventist	1	.3
Shamanism	1	.3
Unitarian Universalism	1	.3
Christian Scientist	1	.3
No Response	1	.3

Marital Status, Income Level and Educational Level

In terms of marital status, 57.1% (n=225) of the participants stated they were single. 37.1% (n=146) participants claimed to be married and 2.8% (n=11) reported to be divorced. 2.8% (n=11) claimed to be “other” and .3% (n=1) stated they were separated.

In terms of income levels, 47.0% (n=185) of the participants reported to earn less than \$25,000 per year. 21.8% (n=86) claimed to earn between \$26,000-50,999 per year. 19.0% (n=75) stated they earned between \$51,000-99,999 per year. 12.2% (n=48) stated they earned \$100,000 or more per year.

In terms of the educational level last completed, 46.2% (n=182) of the participants completed graduate school, 34.8% (n=137) completed an undergraduate degree, 1.8% (n=7) completed an associate/technical degree, 15.7% (n=62) completed high school, .8% (n=3) completed middle school and .8% (n=3) completed elementary school.

Immigration Status and Travel Frequency

The next series of questions on the demographic form asked participants to answer about their immigration status well as their parents' and grandparents' immigration status. Table 3.4, 3.5 and 3.6 depicts the breakdown of participants' answers.

Table 3.4

Years Participants have Resided in U.S.

<u>How Long Ago Did you Move to the U.S?</u>	<u>Frequency</u>	<u>Percentage</u>
N/A (Born here)	162	41.1
1 year or less	12	3.0
2 to 5 years	35	8.9
6 to 10 years	31	7.9
11 to 19 years	41	10.9
20 to 29 years	57	14.5
30 to 39 years	44	11.2
40 to 49 years	9	2.3
50 to 59 years	0	0
60 to 69 years	1	.3
Missing/ No Response	2	.6

Table 3.5

Immigration Status of Participants' Parents

<u>How Long Ago Did Your Parents Move to the U.S.?</u>	<u>Frequency</u>	<u>Percentage</u>
Born	26	6.6
Never Came	83	21.1
1 year or less	10	2.5
2 to 5 years	16	4.1
6 to 10 years	16	4.1
11 to 19 years	38	9.6
20 to 29 years	78	19.8
30 to 39 years	67	17.0
40 to 49 years	28	7.1
50 to 59 years	10	2.5
60 to 69 years	7	1.8
70 to 79 years	3	.8
80+ years	1	.3
Visits for short period of time	5	1.3
Missing/ No Response	6	1.6

Table 3.6

Immigration Status of Participants' Grandparents

<u>How Long Ago Did Your Grandparents Move to the U.S.?</u>	<u>Frequency</u>	<u>Percentage</u>
Born	13	3.3
Never Came	221	56.1
1 year or less	10	2.5
2 to 5 years	10	2.5
6 to 10 years	8	2.0
11 to 19 years	38	9.6
20 to 29 years	36	9.2
30 to 39 years	30	7.6
40 to 49 years	12	3.0
50 to 59 years	12	3.0
60 to 69 years	5	1.3
70 to 79 years	2	.5
80+ years	6	1.5
Visits for short period of time	7	1.8
Missing/ No Response	12	3.0

The majority of participants were born in the U.S. (41.1%; n=162) followed by participants who have resided in the U.S for 20-29 years (14.5%; n=57). The majority of participants' parents/ guardians have never been to the U.S. (21.1%; n=83). Most participants (56.1%; n=221) reported that their grandparents have never been to the U.S.

Based on these answers, the generational status of participant's were determined and coded. Most participants (57.8%; n=228) stated they were first generation immigrants (i.e. participants born overseas and immigrated to the U.S.). Table 3.9 depicts the data of first generation immigrants.

Table 3.7

Immigration Status of First Generation Participants

Duration of being in the U.S	Frequency	Percentage
Less than a year	8	2.1
1 to 4 years	35	8.9
5 to 9 years	26	6.6
10 to 19 years	53	13.5
20 to 29 years	56	14.2
30 to 39 years	43	10.9
40+ years	7	1.8

34.8% (n=137) of the participants stated they are second generation, or were born in the U.S. 4.3% (n=17) of participants reported being third generation, or their parents were born in the U.S. 2.3% (n=9) claimed to be fourth generation, or their grandparents were born in the U.S. .8% (n=3) of the participants did not provide a response.

The final question on the demographic form asked participants to report how often they traveled back to their countr(ies) of ancestral origin. The majority of participants (17.5%; n=69) traveled back to their countr(ies) of ancestral origin approximately once every nine to ten years

followed by participants (16.2%; n=64) who have never traveled back to their countries of ancestral origin since immigrating to the U.S, as indicated in Table 3.10.

Table 3.8

Frequency of Traveling Back to Ancestral Country

<u>How often have you traveled back?</u>	<u>Frequency</u>	<u>Percentage</u>
Never	64	16.2
Once in entire lifetime in U.S.	39	9.9
Once every 9 to 10 years	69	17.5
Once every 5 to 8 years	41	10.4
Once every 3 to 4 years	59	15.0
Once every other year	34	8.6
Once a year	57	14.5
More than once a year	11	2.8
Missing/ Response could not be determined	19	4.8

Statistical Treatment

The exploratory factor analysis (EFA) is the most commonly used factor extraction method (Tinsley & Tinsley, 1987) and can group items into meaningful factors (Worthington & Whittaker, 2006). EFA are more applicable to this project because no preconceived structure about the results is presented in this research, thereby allowing more hypotheses to be generated after the data is gathered. The results of the EFA will be used to generalize further hypothesis in preparation for a confirmatory factor analysis (CFA) but this study will not include a CFA.

Extraction Method

Researchers in the social sciences commonly use either a principle component analysis (PCA) or factor analysis (FA) to discern any latent factors when working with EFA (Costello & Osborne, 2005; DeVellis, 2003). The differences between the two different analyses have been controversial in the past with some researchers claiming little difference between the two analysis and other researchers claiming a vast amount of differences (Costello & Osborne, 2005;

Guadagnoli & Velicer, 1988). Costello and Osborne (2005) note that PCA ignores any possible latent variables and only calculates variances of manifest variables. PCA reduces items but does not take into account any latent variables underlying the structure (Worthington & Whittaker, 2006). Furthermore, PCA often inflates variance levels (Gorsuch, 1997; Costello & Osborne, 2005). Therefore, PCA would not be appropriate due to the goal of this study, which is to discover the possibility of latent variables, such as T-M.

The role of FA is to find items that fit best together in the fewest number of factors possible (Gorsuch, 1997; Tinsley & Tinsley, 1987) and its purpose is best used for researchers interested in developing novel scales (Worthington & Whittaker, 2006). Furthermore, FA has been shown to be more easily generalizable to CFA than PCA. FA is more appropriate than PCA in this case because the goal of the scale is to reduce the number of items in the scale, thereby providing parsimonious explanations, or factors.

Factor Extraction Method

After FA has been determined to be the most appropriate statistical treatment, the next determinant is the factor extraction methodology. Factor extraction is important to determine depending on how the data is distributed (Worthington & Whittaker, 2006; Costello & Osborne, 2005; Tinsley & Tinsley, 1987). Two types of extraction methods can be chosen, descriptive or inferential (Tinsley & Tinsley, 1987). Descriptive extraction includes PCA and is used when participants are assumed to represent the general population of interest. Inferential extraction includes maximum likelihood (ML) (Tinsley & Tinsley, 1987) and principal-axis factoring (PAF) (Costello & Osborne, 2005). This method allows researchers to generalize from a sample of participants to the general population of interest but does not assume that the sample recruited is representative of the population of interest (Tinsley & Tinsley, 1987). In this case, inferential

extraction will be utilized because the data collected does not fully represent the population of interest as is noted by the demographic distribution in the previous section.

Literature indicates that either maximum-likelihood (ML) or principal-axis factoring (PAF) are most recommended extraction methods under EFA (Worthington & Whittaker, 2006; Costello & Osborne, 2005). The main difference between the two extraction methods relate to whether the data is normally distributed or not (Costello & Osborne, 2005). ML is more appropriate to utilize when data are “relatively normally distributed” whereas PAF is more appropriate when the assumption of normal distribution is “severely violated”, or is “significantly non-normal” (p. 2). PAF is used to analyzed the variance in common items, seeking a parsimonious explanation to account for the correlation of variables.

After the researcher analyzed participants’ responses, it was discovered that several items revealed a non-normal distribution, although the researcher determined not enough items appeared skewed enough to appear that the normal distribution assumption was “severely violated” or “significantly non-normal”.

Determining factor extraction methods has severe limitations in current research. Costello and Osborne (2005) noted that

“information on the relative strengths and weaknesses of these techniques [factor extraction methods] is scare, often only available in obscure references. To complicate matters further, there does not even seem to be an exact name for several of the methods; it is often hard to figure out which method a textbook or journal article authors is describing and whether or not it is actually available in the software package the author is using” (p. 2).

Given the drawbacks of determining factor extraction methodology, the researcher analyzed the data using both ML and PAF, with very similar results. Therefore for purposes of this study, a ML will be utilized based on the original assumption that the data is relatively normally distributed.

Rotation

Rotation is used to clarify the underlying structure of data (DeVellis, 2003; Costello & Osborne, 2005) and helps generalize findings to the population (Tinsley & Tinsley, 1987). . Researchers can determine which rotation to utilize based on theory or data (Worthington & Whittaker, 2006). Oblique rotation assumes factors are correlated and are ideal over orthogonal rotations, which assumes factors are unrelated, in the behavioral sciences (Worthington & Whittaker, 2006; Costello & Osborne, 2005; Tinsley & Tinsley, 1987). Costello and Osborne (2005) recommend that social science researchers use oblique rotations given that different human behaviors are oftentimes related to one another and seldom separated into clear independent functions. DeVellis (2003) suggest that if factor correlations are less than .15, than it is recommended to utilize an orthogonal rotation rather than oblique rotation, which would be more appropriate for factor correlations above .15. After the data was run through SPSS, the correlation matrix indicated the majority of factors possessed a correlation above .15 with one another, further suggesting that oblique rotation would be most appropriate to utilize in the data analysis. Furthermore, if the researcher makes an error in assumption and the investigated factors are truly uncorrelated, then there is little difference between using an orthogonal or oblique rotation (DeVellis, 2003). An oblique rotation will be utilized in this study because both theory and the correlation matrix indicated that the factors found are likely to be related.

Oblique rotation possesses several different methods that can be chosen, including promax and varimax. Fabrigar et al. (1999) indicate that there is no rotation that is more commonly used in scale development within an oblique rotation. Additionally, the several rotation methods are difficult to compare with one another because all of them achieve the same purpose, which is to clarify the underlying structure (Finch, 2006). In their discussion on common practices in EFA, Costello and Osborne (2005) were not able to find articles that clearly depicted why researchers chose certain rotations. In one research article, it was discovered that both oblique (promax) and orthogonal (varimax) rotations yield similar results when attempting to discover which items correlate with which factors (Finch, 2006). However, promax performs better when attempting to discover a simple underlying structure, or a parsimonious structure (Dawis, 1987), with items loading highly on one factor and low on other factors (Conway & Huffcutt, 2003; Fabrigar et al., 1999; Finch, 2006). Results from the EFA revealed a simple structure, which will be further discussing in Chapter 4. Thus, a promax rotation was adopted since this method has been shown in literature to best represent simple structure in an EFA.

Summary

Chapter 3 described the design of the scale, selection and construction of scale items, the intended population, sampling procedure, participants' demographics and the rationale for choosing the statistical treatment for an EFA. Chapter 4 will detail the specific statistical criteria met to appropriately analyze the data with EFA as well as the results of the study.

CHAPTER 4

RESULTS

Introduction

This chapter discusses the statistical treatment utilized for this project in detail. Specifically, this chapter will analyze the Kaiser-Meyer-Olkin Criterion and Bartlett's Test of Sphericity, eigenvalue rule, Scree Test, Scree Plot and Pattern Matrix for the exploratory factor analysis (EFA). The chapter will end with the posteriori factor names and reliability analysis of each factor and the new scale.

Kaiser-Meyer-Olkin Criterion and Bartlett's Test of Sphericity

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) statistic is the most common test used to determine whether the scale under investigation can be factored (Costello & Osborne, 2005). This test evaluates whether the correlations are chance correlations or are significant enough to be factored (Worthington & Whittaker, 2006). The Kaiser-Meyer-Olkin Measure (KMO) for the data was determined to be .872. Values of .60 and above are required for an appropriate factor analysis, with values closer to 1.0 as better (Worthington and Whittaker, 2006). Therefore according to the KMO criteria, the APPIVS is able to undergo a factor analysis.

Another test that can be used to determine the factorability of the scale under investigation is Bartlett's Test of Sphericity, which determines whether or not variables are uncorrelated (Worthington and Whittaker, 2006). However, it should be noted that this test should only be used when there is a small sample size (5:1 ratio or less between participants and items on the scale). Bartlett's Test is easily influenced by samples sizes higher than the 5:1 ratio

and cannot be used as the sole determinant for factorability. In the case of this study, the ratio between participants and items was approximately 9:1; therefore Barlett's Test should be interpreted with caution. Table 4.1 depicts that Barlett's Test of Sphericity was significant, indicating that the factors are correlated with one another (i.e. reject the null hypothesis) and that factorability is appropriate for the APPIVS.

Table 4.1

Bartlett's Test of Sphericity

Approx. Chi-Square	7100.998
df	1035
Sig.	.000

Factor Determination

After factorability had been determined to be appropriate for the APPIVS, the next step is to determine the number of factors and whether items should be retained or deleted using both statistical analysis and theory. As Worthington and Whittaker (2006) noted "...EFA becomes a combination of qualitative and quantitative methods..." (p. 807). They recommend that the most effective form of EFA is test and retesting the factorial structure in order to produce the "most meaningful" structure, which eventually leads to a "tentative rather than a definitive outcome" (p. 808). Tinsley and Tinsley (1987) indicated that "the actual interpretation of a factor analysis calls for a high degree of creativity, ingenuity, and familiarity with the data that was analyzed" (p. 421). As a general rule in factor determination, researchers should retain factors if they are able to be understood in "meaningful way no matter how solid the evidence for its retention based on the empirical criteria..." (Worthington & Whittaker, 2006, p. 822).

Eigenvalue Rule

One of the main criteria to determine how many factors have been extracted is the eigenvalue rule (DeVellis, 2003). This rule postulates that any factor with an eigenvalues less than 1.0 should not be retained. Eigenvalues indicate the importance of factors in the instruments through calculating the variance in all the items that load onto specific factors (Worthington & Whittaker, 2006). As is similar with the Scree Test, eigenvalues are calculated based on the residuals of each previous factor; thus, the values become increasingly smaller. Table 4.3 depicts the eigenvalues after extraction.

Table 4.2

Eigenvalues After Extraction

Factor	Total Variance	Percentage of Variance
1	8.477	18.429
2	2.078	4.518
3	2.569	5.585
4	2.523	5.485
5	1.390	3.023
6	1.132	2.461
7	.878	1.909
8	.914	1.987
9	.875	1.903
10	.625	1.358
11	.601	1.306

The research on the reliability of eigenvalues appears to be inconclusive. Costello and Osborne (2005) noted that eigenvalues is the least accurate method of determining factor retention. Worthington and Whittaker (2006) claimed that the eigenvalue rule may be “too generous” (p. 114). However, Ledesma and Valero-Mora (2007), stated that eigenvalues “... can lead to arbitrary decisions; for instance, it doesn’t make much sense to regard a factor with an eigenvalue of 1.01 as ‘major’ and one with an eigenvalue of .99 as ‘trivial’ ” (p. 2). In the case of this study, several eigenvalues are near the 1.0 mark, indicating some arbitrariness when

interpreting the number of factors to retain. However, given that previous research has indicated that the eigenvalue rule to be inconclusive, the researcher opted to take a more conservative approach when utilizing this rule. Therefore, any eigenvalues with values higher than 1.0 were decided to be significant enough to retain. Hence according to the eigenvalues, the researcher decided to retain six factors, whilst acknowledging that the eigenvalue rule may not be a strenuous enough criteria, as according to literature.

Scree Test

Another criteria that can be used to determine the number of factors is the usage of the Scree Test, which has been argued to be more accurate than the eigenvalue rule (Cattel & Vogelman, 1977). This test pictorially depicts the relative values of the residuals of all the previous factors, unlike the eigenvalue rule, which uses the absolute values of residuals (DeVellis, 2003). However, the basic concept exists in that the Scree Plot utilizes the descending values of eigenvalues (Worthington & Whittaker, 2006). The Scree Plot is read through looking at the most significant “break” on the plot, which is followed by a plateau in values (p. 821). Cattel and Vogelman (1977) indicated that the Scree Test should examine where the factors begin to level off, or grow horizontal as residuals become increasingly smaller. Figure 4.1 shows that the Scree Plot.

Figure 4.1

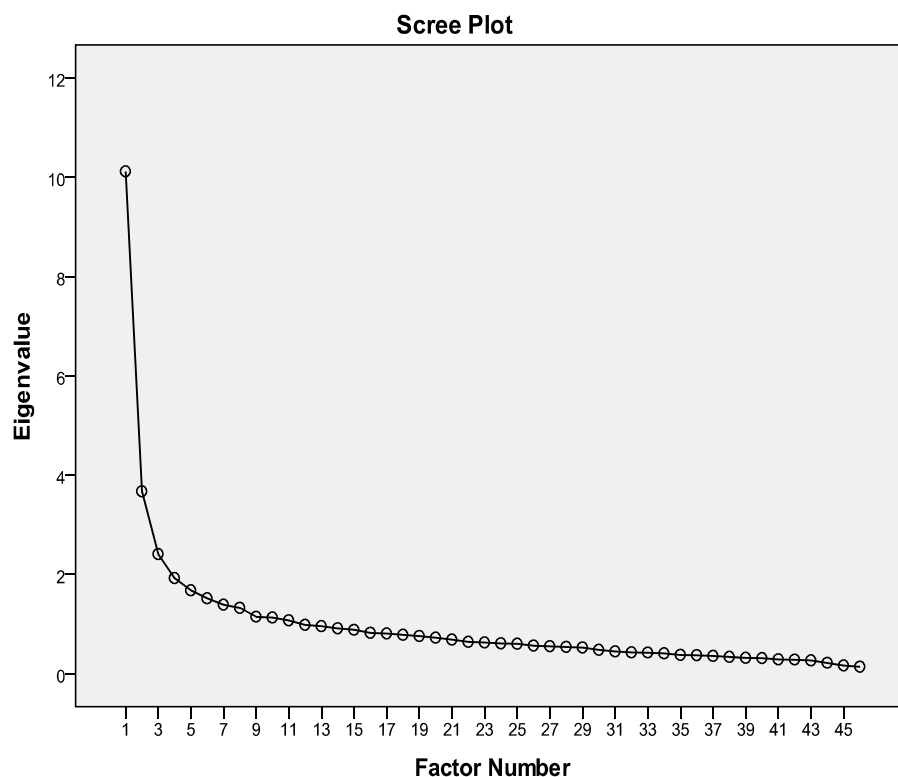
Scree Plot

Figure 4.1 depicts several “breaks” in the curve. The most significant drops on the Scree Plot can be viewed between Factor One and Two. Significant breaks can be interpreted between several factors up until Factor Six. A five factor model was ultimately adopted, when considering the eigenvalue and Scree Plot criteria in conjunction with one another.

Cattel and Vogelmann (1977) warned that the Scree Test may not be a reliable indicator of how many factors exist in the structure if there is the same number of factors and variables. Figure 4.1 shows that the APPIVS can reveal more than 45 different factors. Therefore, the Scree Test results should also be interpreted with caution and not used in isolation as a mode for retaining/ deleting factors.

Pattern Matrix

The Pattern Matrix depicts item loadings and cross-loadings for the AAPIVS. Worthington & Whittaker (2006) noted that the more items a factor possesses, the more confident one can have about the reliability of the factor. In general, it is good practice to disregard any factors with less than three items (Worthington & Whittaker, 2006). Although it is generally not recommended to retain factors with three items or less, an argument can be made if the items are highly correlated (greater than .70) and the researcher can explain the pairings through “interpretability”, although they remain weak factors in the general solution (Worthington & Whittaker, 2006, p. 821). Any cross-loadings with less than a .15 difference (Worthington & Whittaker, 2006) or loads at .32 or higher on more than one factor (Costello & Osborne, 2005) is recommended to be deleted. The cross-loaded item between Factor Five and Six (Item 35) satisfied the cross-loading rules and were determined to load onto Factor Five. Although a sixth factor could be retained using theory because both items loaded above .70, it was determined to be dropped due to having only two items. Therefore, the Pattern Matrix was interpreted to depict five strong factors.

Conclusion of Factor Determination

The results from the Pattern Matrix, Scree Test and eigenvalue rule were similar. The Scree Plot was interpreted to reveal five factors. The eigenvalue rule noted six factors, although this rule has been documented various times in literature to be too generous. Because factor analysis involves both an objective and subjective interpretive component (Worthington & Whittaker, 2006), the researcher decided to retain five rather than six factors due to the two item loading on Factor Six, as depicted in the Pattern Matrix.

Item Retention and Deletion

All items that were not associated with the five factor solution were deleted. Additionally, Worthington and Whittaker (2006) outlined four different criteria to use when determining further item deletion. They explained that items should be deleted if items have the:

- 1.) lowest factor loadings
- 2.) highest cross-loadings
- 3.) least internal consistency of scale scores
- 4.) low conceptual consistency with other items on the factor

In Worthington and Whittaker's (2006) analysis of EFA and CFA in Counseling Psychology articles, the most common methodology of retaining and deleting factors and items were a combination of utilizing item loadings and cross-loadings on the matrix.

In regards to first criteria, Worthington and Whittaker (2006) recommend that factor loadings should be set as low as possible without compromising the structure. Any factor loadings less than .32 should be deleted, as per recommendations by Costello and Osborne (2005). As noted in Table 4.2 on the Pattern Matrix, five items' values (3, 12, 30, 34, and 46) were suppressed using SPSS and subsequently deleted from the final scale.

In regards to the second criteria, the Pattern Matrix depicts several items that load with one other item (items 19, 24, 35). Cross-loadings occur when items are unclear or the hypothesized factor structure is mistaken (Costello & Osborne, 2005). Item 19 cross-loaded with less than a .15 difference between Factor One and Four and was deleted. Both items 24 and 35 cross-loaded over .32 on two factors and thereby were deleted.

Analyzing communalities is a method to satisfy the third criteria. Item communalities can also be helpful when determining the number of factors in addition to the specific items that need to be deleted or retained (Worthington & Whittaker, 2006). Item communalities are generally considered strong if they are uniformly all .80 or greater, although this is very rare in data, especially in the social sciences (Costello & Osborne, 2005). Rather, low to moderate communality values more commonly range from .40 to .70 in the social sciences. Communalities with values less than .40 are generally considered as weaker and indicate that the items possess low conceptual consistency and/ or are unexplored factors that may be explaining the low communality values (Costello & Osborne, 2005). In the case of items with low communalities, Costello and Osborne (2005) recommend that these items either be dropped or more items must be added to clarify the theory..

Worthington and Whittaker's (2006) meta-analysis of Counseling Psychology practices discovered that no studies used communalities as a reason to delete items when conducting a factor analysis to determine item and factor retention. Given that past research has not documented a popular use of communality values as a method of deleting items in Counseling Psychology literature, the author decided to take a less rigorous rule and drop items with communality values of less than .30 rather than .40. Therefore, additional items (28) as well as three already dropped items (3, 12, and 34) were determined to not meet the communality rule.

Criteria Four was utilized through several different methodologies. First, all items that corresponded to any factors other than the strongest five factors were deleted. This included an additional 13 items. Secondly, items that were retained within the five strongest factors were analyzed to determine whether statistical error existed.

An additional EFA can be conducted after all items and factors have been deleted to ensure that significant structural changes have not been made after all the item deletions (Worthington & Whittaker, 2006). The pattern matrix of the final five factor solution was examined after the 27 items was re-factored. Re-factoring of the reduced item pool resulted in six factors with eigenvalues greater than one. The extra sixth factor was a result from factor five (i.e. Traditionality) splitting into two different factors. However upon closer analysis of the face validity of items, the items loading most highly on the sixth factor did not appear to indicate a meaningful factor outside of its relationship with the fifth factor. Thus the author, after consultation with methodologists, decided to retain five factors and to utilize a factor solution that produced loadings of the items onto only five factors. No significant changes appeared after factors were set to five factors and re-factored, thus providing evidence for the stability of the five factor structure.

Reliability Analysis and Factor Meaning

Five factors have been proposed to exist within the APPIVS after the EFA. This section discusses the reliability analysis of each new factor. A further discussion of the new factor namings as well as specific factor retention and deletion will be discussed in the following chapter. Only statistical data will be presented for purposes of this section,

The new five factor model totaled 27 items. Cronbach's alpha was .894, which suggests relatively high internal consistency. According to Nunnally (1978), the alpha should be above .70 for each factor in order to meet the standard for a strong factor. Four of the five factors meet this criterion with Factor Three's alpha at .669, which is a close value to the .70 standard.

Factor One encompasses eight items. The eight items' loadings ranged from .392 to .808 and accounted for 18.43% of the variance. Cronbach's Alpha was determined to be .787 for Factor One. Factor One was named Traditionality.

Factor Two encompasses six items. The six items' loadings ranged from .333 to .568 and accounted for 4.518% of the variance. Cronbach's Alpha was determined to be .787 for Factor Two. Factor Two was named Image Retention

Factor Three encompasses five items. The five items' loadings ranged from .412 to .720 and accounted for 5.59% of the variance. Cronbach's Alpha was determined to be .669. Factor Three retained the name from the a priori factor, Gender Beliefs.

Factor Four encompasses four items. The four items' loadings ranged from .369 to .841 and accounted for 3.02% of the variance. Cronbach's Alpha was determined to be .751. Factor Four was named Familial Preferences.

Factor Five encompasses four items. The four items' loadings ranged from .369 to .841 and accounted for 3.02% of the variance. Cronbach's Alpha was determined to be .798. Factor Five retained the name from the a priori factor, Spirituality/ Religiosity.

Conclusion

Chapter Four discussed the different options used when running an exploratory factor analysis. Rationale was provided for utilizing a five factor model, including a presentation of the Scree Plot, Communalities, Eigenvalues and Pattern Matrix. Furthermore, item deletion and retention was discussed. This Chapter concluded with naming the five posteriori factors and presenting a reliability analysis for each factor as well as the entire scale.

CHAPTER 5

DISCUSSION AND CONCLUSION

Introduction

The final section of this project will include a brief summary of the study and restatement of the hypothesis. The findings of this project will be presented and discussed with relation to the four retained factors, one discarded factor and introduction of a new factor. Revision of the original theory presented in Chapters One and Two will also be reviewed. This Chapter will end with a discussion of the implications and recommendations for further directions in this research.

Summary of the Study

The purpose of this project was to conceptualize traditionality and modernity (T-M) through quantifying these two constructs into a scale in hopes of better understanding the psyche of Asian Americans/ Pacific Islanders (AAPI). Traditionality was defined by the author as “the perseverance of beliefs, attitudes and values reminiscent of one’s ancestral culture at the individual level”. Modernity was defined as “the cultural adaptation and incorporation of values at the individual level in order to accommodate a changing society”. A scale was created after a pool of items was created from an extensive literature analysis along with consultation with two panels of experts. The scale was then taken by 394 participants identifying as part of the AAPI population. Results were analyzed using exploratory factor analysis (EFA).

The scale was constructed with T-M existing on a unidimensional spectrum, which was based on the following rationale:

1. A thorough review of the T-M scale development literature provides more evidence for unidimensional scales than multidimensional scales.
2. Although multidimensional scales exist in T-M research, they have only been researched with Asians rather than AAPI.
3. The multidimensional scales currently utilized have been criticized by other researchers in the field as being unidimensional.

This project's original theory proposed five factors with several subscales, which were discussed in Chapter Two. The original factors included a "Familialism" factor with three subscales, which were Hierarchical Roles, Commitment and Marriage. Another factor was named "Cultural Maintenance" (CM). The third factor was named "Emotional Regulation" (ER) and included two subscales, which were Loss of Face (LOF) and Coping. The final two hypothesized factors were called "Gender Beliefs" and "Spirituality/Religiosity" (S/R). Table 5.1 depicts the origins of the five posteriori factors from the original proposed a priori factors.

Table 5.1

A Priori Factors

Factor	Subscale	Result
Familalism	Hierarchical Roles	Changed to Traditionality
Familalism	Commitment	Changed to Familial Preferences
Familalism	Marriage	Discarded
Emotional Regulation	Loss of Face	Changed to Image Retention
Emotional Regulation	Coping	Changed to Traditionality
Gender Beliefs		Retained (Gender Beliefs)
Spirituality/Religiosity		Retained (Spirituality/ Religiosity)
Cultural Maintenance		Discarded

The new scale resulting from the five posteriori factors consists of 27 items. As can be viewed from Table 5.1, four of the five new factors are similar to the originally proposed theory.

Although Table 5.1 oversimplifies the origins of the new factors because not all items under each factor were retained or deleted, this table concisely explains where a large amount of item

deletion and retention exists after the EFA. For instance, EFA indicated that the new factor, “Traditionality”, possesses a large number of items from the Hierarchical Roles subscales in addition to the LOF subscales. In a similar fashion, a large number of items in the Familial Preferences factor appear to come from the original Commitment subscale. The same concept exists for “Image Retention”, Gender Beliefs and S/R. The deletion of the CM factor will be discussed in the one of the following sections in addition to the emergence of the new Traditionality factor, which was originally proposed to be one of the two constructs under examination in the project.

Conclusions and Implications

This section will discuss the conclusions and implications as the result of the new retained and deleted factors. As covered in Chapter One, the original purposes of this project included to establish a conceptualization of T-M, which integrates both western and eastern empirical research in order to establish a scale that addresses the current controversies concerning T-M scale development. Another purpose was to create a scale that is generalizable to the AAPI adult population. The two hypothesis for this study included that a five factor model will emerge from the scale and the existence of the five factors will measure T-M. Although the findings of this project were consistent with the original hypothesis stated to find five factors, four of the five factors changed in subtle ways and one unique factor was found. This section will be presented through a discussion of the new factor, Traditionality, followed by an analysis of the original unidimensional theory presented in this project. This chapter will continue into presenting the retained factors (i.e. Familial Preferences, Spirituality/ Religiosity, Image Retention, Gender Beliefs) and end with the discarded factor and subscale (i.e. CM and Familialism-Marriage subscale).

Traditionality

One unique factor appeared after the EFA was analyzed, which appeared to be a combination of items from nearly all other a priori factors, with the exception of Gender Beliefs. Traditionality encompasses two items from the Familialism-Hierarchical Roles subscale, one item from the Familialism-Marriage subscale, two items from CM, one item from ER-Coping subscale and one item from S/R.

The eight items that form the Traditionality factor appear to measure what was originally proposed to be one of the two constructs under examination, thereby warranting a change in the theory that has been represented in both literature and in this project concerning Traditionality's relationship to modernity. Traditionality as a construct appears to become a factor, thus concluding that the Asian American Values Scale (AAPVS) may be a measurement of modernity, rather than both of T-M. Furthermore, the Traditionality factor appears to originate from various different a priori factors, thus garnering more evidence that this factor is likely reflective of Traditionality since the scale was originally constructed to measure T-M. As a result, the assumption is left that if Traditionality becomes a factor, then the original constructs under investigation is no longer T-M, but only modernity. Therefore, the AAPVS scale after factorial analysis is reflective of a modernity scale, not a T-M scale.

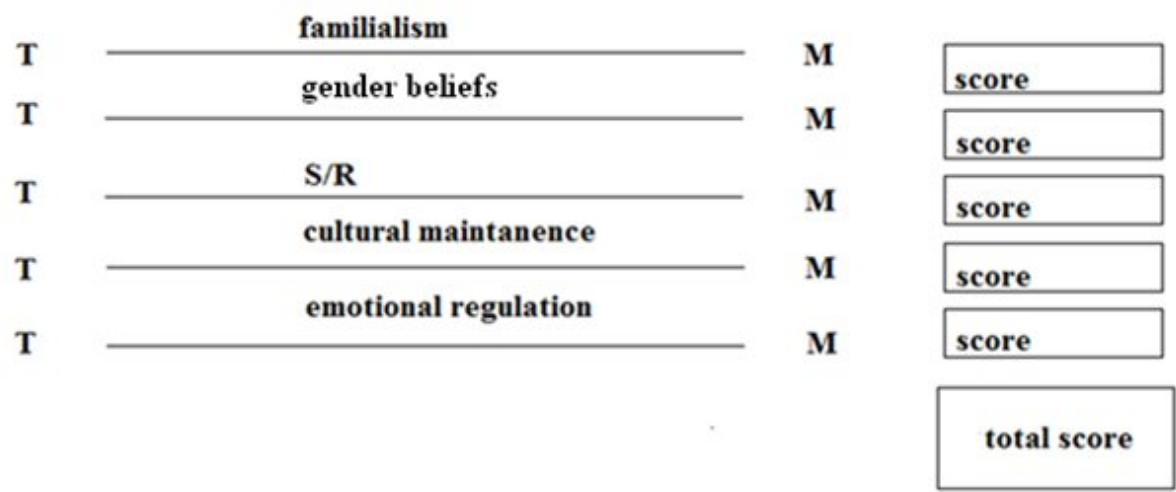
The items in the Traditionality factor appear to be a preservation of traditional values across several domains, which are influenced by both individual and societal levels. Thus the new definition of Traditionality will be shifted from the original proposal's definition to the

perseverance of values reminiscent of one’s ancestral culture at the individual level in reaction to changes at the societal level.

The unidimensional hypothesis originally proposed in this project appears to need revision due to the shift in Traditionality’s role within the scale. Chapter Three presented a unidimensional model with the five a priori factors, as is illustrated in Table 5.2. However, given that Traditionality is no longer considered an over-arching construct under investigation, but rather a posteriori factor, the diagram originally illustrating the measurement intentions of the AAPIVS has been modified. Table 5.3 illustrates the revised illustration of the AAPIVS.

Figure 5.1

A Priori Unidimensional Model of the AAPIVS



suggesting that this scale could possibly be a one factor model, rather than the five factor model adopted by the author. Furthermore, the eigenvalues for Traditionality is nearly four times greater than the next factor, Image Retention. This suggests that a one factor model could be possible. If a one factor model were retained, than the previous held notion that T-M are unidimensionally related would prove to be correct and align more so with the western sociologist's theory of unidimensionality. Furthermore, an eight item scale would not be too different from previous T-M scales since Inkeles' (1966) Overall Modernity scale encompassed 14 items, Kahl's (1968) Modernity II scale possessed eight items and Schnaiberg's (1970) Modernity Scale retained 24 items. Another interesting point is that these scales were all scales that measured modernity and not traditionality, which have only been scales found in eastern literature. Thus, this theory warrants more investigation but is interesting to note because it is different from all previous literature.

Another possibility that Traditionality became a factor is due to the different population sampled, which is AAPI and not an international population that T-M research has primarily focused on. With the definition that modernization is "a change from traditional customs to ones that are forcibly or voluntarily borrowed from a dominant society that results in changes in behavior or customs" (Divale & Seda, 2000, p. 132), it may be theoretically possible that Traditionality is defined within the context of modernity in a more "dominant society" (i.e. the United States) than in a less dominant society, where Traditionality is able to exist in a purer form. If one were to use the definition that modernity stems from a more dominant society, than a dominant society such as the United States would encourage a change in traditional beliefs and customs, thereby creating a less likely tendency that traditionality can be discovered on its own. Instead Traditionality may only exist in relation to modernity, similarly to what the AAPIVS

may be describing. Western sociologists have concluded that Traditionality somehow exists in some relationship to modernity but have been inconclusive as to how they are related. Perhaps, this study has shed some new evidence on how the two constructs can be measured in relation to one another.

The discoveries found in this project were more divergent from Eastern psychologists' viewpoints. One of the reasons that virtually no studies quantifying Traditionality have been found in the United States is because eastern psychologists do not believe such a notion can exist. Similarly with western sociologists, both parties hold the belief that Traditionality cannot exist in a more modernized society. For instance Yang (2006) believed that "Western psychologists do not have such phenomena and issues for investigation", when referring to T-M (Yang, 2003, p 279). Whereas this project's results indicate that concepts as T-M likely exists in the United States with AAPI, Traditionality may not exist on its own, but rather as part of modernity. A baseline (i.e. Traditionality) may have to be established in order to measure a cultural adaptation or incorporation of changing values, which explains Traditionality becoming a factor within the AAPIVS.

More definite research is warranted in this area, especially given the scarce attention paid to whether Traditionality is able to exist in a "modern" society, such as the United States. Are Traditionality studies scarce and more focused on modernity in the U.S. or is modernity unable to exist without Traditionality as part of its inherent definition? The factors discovered in the T-M scales continue to be inconclusive and the relationship between T-M continues to be puzzling. The only conclusive consideration is that the theory of T-M at both a sociological and psychological level appears to be related.

Retained Factors

Image Retention

Originally, an Emotional Regulation factor was proposed, which examined AAPI's values regarding a coping and LOF component, as indicated by the two subscales under Emotional Regulation. This factor included eight questions. Emotional Regulation was revised to become the Image Retention (IR) factor, which includes six items.

Image Retention assesses participants' motivation to manage one's own face, emotions and desires in public and with the family. The first three items under Image Retention originated from the Emotional Regulation-Loss of Face (LOF) subscale. These findings likely imply that relationships, especially one's relationships with their family, are influential in retaining one's image or how an individual may express his or her feelings. The possibility of losing face or maintaining one's face in public may be a strong motivator in how an AAPI individual who scores lower (i.e. lower on modernistic beliefs) on the AAPIVS may express his or her emotions in public.

Losing face and maintaining one's face has been determined to be a significant motivator of behavior in Asians and AAPI (Zane & Yeh, 2002; Kim et al., 2001). Several items in Image Retention assess a more collectivistic notion of putting other's desires over one's individual desires as a coping mechanism. Some items combine notions of collectivistic motivators from the family in addition to how an individual may behave and/or express himself. Two items originated from the Familialism-Commitment subscale and one item originated from the Familialism-Hierarchical Roles subscale. The shift in these three items from the a priori Familialism factor to Image Retention is consistent with literature findings noting that coping in AAPI is influenced by the family unit (Allen & Heppner, 2011). Emotional suppression and

subdued expression of feelings is a more common notion with AAPI than Caucasian Americans and is inherited from family emotion socialization process (Saw & Okazaki, 2010).

Furthermore, it is important to note that “those with greater adherence to Asian values experienced more muted negative effects of emotional suppression than did those with weaker adherence to Asian values” (Saw & Okazaki, 2010, p. 83), with reference to adherence to traditional AAPI values. This factor can be used to better determine what may be more useful for an AAPI in counseling, especially given that their motives for emotional suppression or coping behavior may be related to Image Retention. Additionally, this framework helps therapists better understand how influential an AAPI’s family may be when developing certain ways of emotional expression.

Previous literature has not fully examined T-M as it relates to coping and loss of face. As discussed in Chapter 2, some literature have implied that loss of face may be associated with traditional beliefs through incorporating various indirect measurements of Traditionality with other values, such as level of acculturation, (Kim, et al, 2001; Patel et al., 1996) as well as urbanization and age (Chang et al., 2003). Although this scale cannot confirm whether Traditionality is associated with coping and loss of face, it can be inferred from this scale that individuals who identify with more modern values are less likely to be motivated by fear of losing face. Furthermore, individuals that score lower on the AAPIVS (i.e. higher in modernity) may be more likely to outwardly display their emotions, rather than subdue or suppress their emotions.

One of the Emotional Regulating-Coping subscale items moved to Familial Preferences whereas another Coping item moved to the Traditionality factor. Three items were discarded from the a priori factor. Previous scales discussed in this project have not established a

relationship between modernity and LOF or coping. Therefore, the discovery of the Image Retention factor appears to be new in the theory of modernity.

Gender Beliefs

Most of the items were retained in the Gender Beliefs a priori scale after EFA was analyzed. Gender Beliefs was the only factor whose items were reversed, indicating that a higher score on this factor is associated with a higher score on modernity.

The Gender Beliefs factor assesses participants' beliefs of gender equality over several arenas including politics, education, career and hierarchical status in the family. An additional item originated from the Familialism-Hierarchical Roles factor. This item also encompasses a gender component but is more specific to familial beliefs, unlike the other four items.

Two original Gender Beliefs items were discarded. A closer examination of the first item indicated that participants were less likely to endorse this item due to the expectation that women should also provide financial support in addition to household chores. Another traditional value of only associating oneself with one's identified gender was additionally discarded, which may be a reflection of living in a society where it is not as taboo to associate with the opposite gender.

This may be important for practice because assessing the gender beliefs of an individual can shed more light on the motivations and expectations of an individual presenting to therapy. Furthermore, this factor illustrates the interpersonal relationships between males and females who endorse more or less modernistic values. For example, a woman who endorses less modernistic values may believe that she is unable to attain the same education level or career as men. Similarly, a male who endorses less modernistic values may hold less of an expectation that woman can hold the same status in the family as a male.

The retained five items in Gender Beliefs indicate endorsement of egalitarian beliefs and the notion of equality, which has been replicated in previous scales. Gender has been a consistently discovered factor in Yang's scales from 1991 until his 2007 scale. Furthermore, Inkeles also discovered "Women's rights" to be a theme in his Overall Modernity (OM) scale (1966). The Gender Beliefs factor confirms previous literature that such a component likely exists in relationship to modernity.

Familial Preferences

The new factor, Familial Preferences, originated from the Familialism- Commitment subscale of the a priori Familialism factor. The Commitment subscale encompassed six items from the 16 item factor of Familialism.

The Familial Preferences factor assesses participants' adherence to familial and preservation of the family unit. Familial Preferences encompasses three items from the Familialism-Commitment subscale. The additional item originated from the Emotional Regulation-Coping subscale. Two other original Commitment items were moved to the posteriori Image Retention factor.

Recent literature has discovered that traditional parenting within the AAPI family unit leads to more authoritarian style of parenting and increased conflict between the parents and children (Park, Kim, Chiang, & Ju, 2010). This is important to note because of Traditionality's link to the functioning of the family unit and subsequent development of children raised in families that adhere stronger to more traditional AAPI values. This may lead to increased conflict in different generations of AAPI within the family unit, as adherence to different sets of values increase the parent-child conflicts (Ahn & Kim, 2009). For instance a younger generation family member may hold more modernistic values concerning familial responsibilities whereas

an older family member may expect stronger traditional adherence. Literature has found that such conflicts include emotional distance, interpersonal problems, lack of self-confidence and assertiveness, anxiety as well as depression (Ahn & Kim, 2009). By better conceptualizing what the gaps in values may be in AAPI's different family members' expectations, more research and implications can be generated for further multiculturally sensitive therapeutic practice and conceptualization.

A factor or theme related to an individual's family has been replicated in previous literature findings. It is interesting to note that at least one factor pertaining to the family exists in both eastern psychologists' traditionality scales as well as western sociologists' modernity scales, indicating the importance of the family unit in both T-M found in either society. Inkeles' (1966) OM scale included a "family size" and "kinship obligation" theme. Doob's Modernity Scale (1967) included a "Tribalism" theme whereas Kahl's M-1 scale included a "low integration with relatives" theme. Similarly, Schnaiberg's (1970) Modernity Scale included an "extended family" and "nuclear family role structure" theme. Yang's scales from 1991 spanning to 2007, possessed a factor pertaining to filial piety in each of his traditionality scales but not his modernity scales. Therefore, the discovery of the Familial Preferences factor is not surprising given the abundance of past scales with either a theme or factor pertaining to the family unit.

Spirituality/Religiosity

The S/R factor assesses participants' level of adherence and practice of longstanding spiritual and/or religious practices. Although the S/R factor was retained after factor analysis, some items were deleted in the process and an additional item was included from the original CM factor. Three of the original six items were retained in the S/R factor, which were items particular to the adherence of S/R. These items imply that individuals who score lower on the

AAPIVS are more likely to adhere to S/R practices in both every day observations as well as inherit longstanding S/R practices from their families. This can also be interpreted that adherence to long-standing S/R beliefs are less likely to be endorsed by AAPI with higher scores on the AAPIVS.

One item was moved to the Traditionality factor after EFA. The remaining two items from the a priori S/R scale were discarded. Feedback from one of the S/R items indicated that this item held ambiguous meanings. In respect to the final discarded item, socialization does not appear to be a determinant factor when deciding one's level of modernity, which was discovered when all items pertaining to socialization were discarded from the scale. This can be inferred that choice of who an individual socializes with is not indicative of one's modernistic behaviors and that friendships are not necessarily influential on one's level of modernity.

The S/R factor is a new discovery with the AAPI population. Only one other scale mentioned in this project included a theme on S/R. Schnaiberg's (1970) Modernity Scale included a "religiousity" theme from the Turkish population. Yang's 1991 and 2003 traditionality scales included a subscale that was called "worship ancestors", which was part of the filial piety factor. However, the concept of worshiping ancestors is a notion that can be contained in some S/R values but is not a comprehensive enough factor that generalizes to S/R. Therefore, the finding that S/R has a component in modernity is interesting to note given that only one previous study, which was conducted on the Turkish population, discovered this concept's relationship to modernity.

Discarded Items

One a priori factor, Cultural Maintenance (CM), and one subscale, Familialism-Marriage was discarded after an EFA was conducted. Although not all items were discarded from both

groups, enough items were discarded to warrant the entire factor and/or subscale to be discarded from the a priori theory presented in Chapters One and Two.

Cultural Maintenance

Originally CM was proposed with 10 items. CM was developed to measure participants' values involving their adherence to everyday cultural practices, such as food, music and reading preferences in addition to socialization preferences. Investigation to AAPI individual's language adherence was also added into the CM scale. Three items were retained under CM. One item was moved to the S/R factor. Two items were moved to the Traditionality factor. The other eight items were discarded.

As was discussed in Chapter Two, CM has not been proven to be a factor within T-M scales in the past, which remains true with this project. However, it should be noted that the Pattern Matrix depicted strong pairs of items within CM, but these pairs of items were ultimately discarded because two questions were deemed too few to become a factor on its own. Therefore, the results of CM should be interpreted with caution, given that had more items been submitted and tested, then it could have been possible that portions of CM would have become a factor. For instance, the items measuring participants' values involving language adherence possessed an eigenvalue of 1.132, thereby satisfying the eigenvalue rule. However, this potential factor was discarded because it possessed too few items but indicate a possibility of the existence of a language component to modernity. Similarly, another pair of items assessing everyday preferences possessed an eigenvalue of .878, which was close to the eigenvalue rule but were discarded for the same reason as language adherence. Therefore, a possibility exists that some features of CM may be associated with T-M, but further quantitative studies are needed to better elucidate whether or not portions of CM can actually become a factor.

Other values originally hypothesized under CM were discarded, such as the notion of patriotism and socialization practices. This can be inferred that one's level of pride in his or her ancestral culture is not related to how modernistic one can be. As noted under the S/R section, socialization with friends does not appear to be an indicator in an AAPI individual's level of modernity.

Although CM was discarded overall, several items from this a priori factor remained useful because they shifted to other posteriori factors, especially Traditionality. If this factor had not been proposed in the original theory, then other posteriori factors may not have been discovered by the EFA. Additionally, the hypothesis of CM has led to further research recommendations about the possible existence of other factors related to modernity, such as language fluency and everyday preferences.

Familialism-Marriage Subscale

The Familialism-Marriage subscale encompassed six out of 16 items under the a priori factor, Familialism. The Marriage subscale was originally developed to identify participants' values surrounding marriage, child-rearing and sex.

One item from this subscale was retained and moved to the Traditionality factor. The other five items were discarded. Similarly as with CM, Familialism-Marriage contained a pair of items that may have been retained had more items been generated with an eigenvalue of .914. This pair of items assessed more conservative values regarding marriage and child rearing practices.

Recommendations for Future Research

This study adds to our current knowledge by contributing a different viewpoint of how modernity and traditionality may be related as well as providing a five factor model measuring

modernity. As of known to the researcher, no studies concerning T-M have been found with the AAPI population. Additionally, no scale measuring T-M has offered a five factor model similar to the one proposed in this project, including novel discoveries such as S/R, Image Retention and Traditionality.

Traditionality continues to be an elusive construct that is often mentioned in literature but remains unable to be quantified. For instance, articles gathered from 2010-2011 on AAPI included numerous journal articles eluding to traditional values but none of the articles contained any instruments or empirically validated conceptualizations of traditionality's definition. The measurements utilized were often called a values scale with the assumption that T-M was being measured. For purposes of this project, Traditionality was not discovered to be one of the constructs under examination, but was discovered to be a factor that contributed to modernity. The final scale includes 27 items and are defined by five different variables- S/R, Gender Beliefs, Familial Preferences, Image Retention and Traditionality. These five factors have not been replicated in previous literature to co-exist with one another to produce modernity. A theme or factor pertaining to gender and the family has been replicated in previous scales. An S/R theme was determined in one other scale. Image Retention and Traditionality appear to be unique discoveries in this project. More quantitative research is needed to continue investigating the factors that underlie modernity as well as how T-M may be related in different societies.

A possible next step for this research is a confirmatory exploratory analysis (CFA) in order to discover whether or not the theory proposed from the EFA is correct. The CFA will be able to better determine and provide more statistical data on whether the AAPIVS actually measures the construct of modernity and how the factors hold together. If this study were to proceed beyond a CFA, then establishing concurrent and convergent validity by validating this

scale against previous scales of T-M may be useful. Another recommendation is to perform a qualitative study on T-M to better tease out factors pertaining to T-M so that more factors may be measured in a quantitative fashion and may elucidate the contention between utilizing a unidimensional or multidimensional framework.

Limitations

As mentioned previously, EFA is heavily reliant upon the researcher's own formulated theories and interpretation of the process. Although this project adhered to strict empirical rationale and theory, there is always the possibility of error and subjective interpretation of theory and the results. EFA is exploratory in that "...it was designed and is still most appropriate for use in exploring a data set. It is not designed to test hypotheses or theories. It is, as our analyses show, an error-prone procedure even with very large samples and optimal data" (Costello & Osborne, 2005, p. 8).

Furthermore, the participants in this study were not equally distributed by any demographics, as noted in Chapter Three. This affects the generalizability (i.e. external validity) of the results discovered in this project as well as is highly influential on the interpretability of the statistical treatment. Further studies may limit the demographic search to a more specific population in order to better determine how modernity and traditionality are defined and related within specific populations. Furthermore, although a physical copy of the scale was available for participants to take, the majority of responses were received electronically. This sampling method is limited in that it usually captures the most motivated respondents in combination with participants who have access to a computer and internet.

As discussed in a previous section, another limitation is the amount of items generated for this scale. More factors may have been discovered if more items had been generated for

certain aspects, such as language, socialization and marriage practices, which were discovered to be possible factors through couplets of items holding strongly together. However given that two items would have constituted a poor factor, these couplets were discarded but noteworthy for future studies.

As with taking any form of self-evaluation assessment tool, this tool is limited to how an individual responds to his or her self-rating and any other external factors present when the individual is taking the scale. Furthermore, indirect feedback was given from participants that this scale was difficult to interpret and understand. Although the scale was translated in Chinese, the translation process was difficult because certain translations from the English to Chinese language could not capture the true meanings of several items, which could also affect respondent's answers. Future studies may also find it more facilitative to recruit a varying distribution of participants if scales are translated into more than one other language.

Conclusion

As a final review, the hypothesis will be discussed in relation to the findings of this project:

Hypothesis One: A five factor model will emerge from the scale

Yes, a five factor model did emerge from the scale. The five factors were deemed to be Traditionality, Image Retention, Gender Beliefs, Familial Preferences and Spirituality/Religiosity.

Hypothesis Two: The interrelationship among the five factors will indicate the potential existence of T-M based on the assumption of a unidimensional viewpoint.

Although the scale remains a unidimensional scale, Traditionality was discovered to be a factor as part of measuring modernity. Therefore the five factors are correlated with one another

but indicate the potential existence of modernity as a construct under measurement and Traditionality as part of the five factor model. The new definition for Traditionality is the perseverance of values reminiscent of one's ancestral culture at the individual level in reaction to changes at the societal level.

Overall, this project appears to both confirm some aspects of previous research on T-M and challenge previous findings. This project adds to current knowledge by sampling AAPI, which has not been done before in studies with a scale intended to measure only T-M. This project confirmed western sociologists' claims that modernity exists in modern societies, such as the U.S. Furthermore, this project challenged eastern psychologist's notion that neither T-M are able to exist in western society and that T-M studies should only be designated to be studied overseas, particularly in eastern societies. This dissertation discovered that both T-M exist in western societies and continue to be pervasive in everyday activities. Both T-M, especially Traditionality, are likely to differ by country and culture given their strong relationships to the societal level. This confirms Yang's multiple modernity hypothesis.

However similarly to previous research in both eastern and western societies, more studies are needed to further assess how the two constructs are related to one another given the novel discoveries in this project. In this project, it was determined that Traditionality was an inherent part of modernity in the quantitative process. The question remains whether Traditionality is able to exist on its own in a western society. This dissertation determined that one must take into consideration the level of Traditionality in addition to AAPIs' values regarding Image Retention, Spirituality/ Religiosity, Gender Beliefs and Familial Preferences in order to determine AAPIs' level of modernity.

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