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Are Asian Thinking Styles Different? Acculturation and Thinking Styles in a Chinese-Canadian Population

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Acculturation and Thinking Styles in a Chinese-Canadian Population

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Abstract

This research examined the theory of mental self-government and its various thinking yles. The theory of mental self-government (Sternberg, 1988a) has established its utility in veral contexts including education, occupation, partner choices, and cross-culturally. The sociated Thinking Style Inventory (TSI; Sternberg & Wagner, 1991; 1992) has also monstrated its reliability and validity in a Hong Kong population (Zhang, 1999; Zhang & icks, 1997; Zhang & Sternberg, 1998), but it has not been used with Chinese-Canadians. It was pothesized that as Chinese individuals become more acculturated to the North American ltural system, their thinking styles approach European-American norms. This study found the SI to be an internally consistent measure of thinking styles in a Chinese-Canadian population; e median alpha reliability was .82. Observed intercorrelations between the various thinking les were in the anticipated directions and three factors were found to account for 55% of the riance. Significant relationships were found between some thinking styles and socialization riables such as gender, age, amount of education, and years lived in North America. However present data do not support the hypothesis that Chinese-Canadian acculturation was related to theory of mental self-government. Although the TSI and Suinn-Lew Asian Self-Identity

Acculturation Scale (SL-ASIA; Suinn, Rikard-Figueroa, Lew, & Vigil, 1987) were both reliable, here were no significant correlations between the two measures. The absence of a relationship between the TSI and the SL-ASIA is understandable considering the complexity of these onstructs; acculturation has been shown to be multi-faceted and there are numerous possibilities f thinking style profiles. In addition, individuals may diversify their thinking styles to better dapt to an environment, further complicating the matter. Perhaps the complexity of culturation and thinking style profiles does not allow for simple categorization. However, this udy was able to demonstrate that Chinese-Canadians think somewhat differently from two ong Kong populations (Zhang, 1999; Zhang & Sacks, 1997). This sample of Chinese-anadians preferred the legislative, executive, local, and liberal thinking styles over the Hong ong samples.

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With gratitude to the one who supported me,

my husband David Tang.

With love to the ones who shaped me,

my family Chong, Nancy, Warren and Billy Huang.

With humility to the One who sought me,

my Lord God.

And in memory of my beloved A-Whei.

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Chapter 1

Introduction

Do Chinese-Canadians think differently from the European majority population? This ıper will address this question by examining the history and research on thinking styles as ›stulated by the theory of mental self-government (Sternberg, 1988a; 1997). The theory of ental self-government and its associated Thinking Styles Inventory (TSI) are important to study ıce they have been shown to be valid, reliable, and appear to overcome many of the deficits of her theories of thinking. This theory has also been shown to have important applications in merous domains including employment and education. Research in this field has mostly been nducted on European Americans and it is proposed that the theory of mental self-government ›uld be examined in an Asian Canadian population.

In this introductory chapter we will give a brief overview of the Asian population in the ıited States and Canada before moving on to examine the historical context of various thinking les and models of the mind. The theory of mental self-government and its associated asure, the Thinking Styles Inventory, will then be detailed with particular emphasis on the pact of socialization. Since culture is a dominant form of socialization, the Asian-American ture will be explored. This study seeks to examine the relationship between mental self- vernment and acculturation in Chinese-Canadians.

sian Americans

Asian-Americans are an important population to study since the 2000 U.S. Census ureau has reported that 4.2 % of the U.S. population (11.9 million people) has reported being sian. The largest Asian ethnic subgroup is Chinese-American at 21% (2.7 million of the U.S. sian-American population). Statistics Canada's 2001 Census indicated that Asians represent % of the population at 1.8 million, and 61% of these Asian-Canadians are Chinese at 1.1 illion. Asian-Americans represent almost half of all the immigrants to the U.S. and 60% of the mmigrants to Canada. Asians are extremely diverse linguistically, culturally, and ethnically. ney also have different levels of acculturation; some Asian-Americans immigrated in the d-1800's as pioneers in the gold mines and some Asian-Americans will immigrate as recently tomorrow's refugees or "astronaut" families (Barringer, Gardner, & Levin, 1993). But before go into further detail about Asian cultural differences and acculturation, we need to have a tter understanding of Thinking Styles.

hat are Thinking Styles?

The theory of mental self-government suggests that our thinking styles are organized in a nilar way to real-world governmental styles (Sternberg, 1997). Consider the case example of my. This student studies by fully focusing on one thing at a time to the exclusion of erything else. When she's reading or watching TV people enjoy teasing her by trying to gage her in conversation; often she makes non-committal responses. Jenny doesn't like tractions when she is studying and she finds it hard to shift her attention between various tasks projects. She also pays great attention to detail in her work and hobbies and she keeps an naculate apartment. Thus, she does quite well in getting those incessant assignments and ers done for school.

Then there is the case example of Dave who works as an accountant in a firm that
:mands multi-tasking; he needs to be able to manage the accounts, supervise his personnel, and
ıswer telephone calls all at the same time. Dave is able to prioritize his many tasks while
:eping in mind the greater picture; details are less important to him, and this is beneficial in
:lping him excel at his career. Generally his apartment is passable, but it isn't what one would
ll "neat."

According to the theory of mental self-government, it would appear that Jenny has a
ɔnarchic thinking style since she tends to allocate all her attention to one task at a time,
ıereas Dave could be described as having an hierarchic thinking style since he is able to
ocate attention to various prioritized tasks. In addition, Jenny tends to be locally focused on
tails while Dave tends to be more global in his thinking. Even though these thinking styles
:fer, each individual is able to succeed in his or her profession.

Thinking styles are important to study since they provide an alternative to ability and
rformance measures such as SATs, GPAs, or WAIS-III scores. Research has suggested that
ility tests are weak predictors of an individual's functioning, since they account for only 20%
the variance in academic performance and 10% in employment settings (Sternberg, 1988a,
88b; Sternberg & Ruzgis, 1994). They may also be susceptible to improvements (Sternberg &
lliams, 1997). Thinking styles have been shown to be better predictors of academic variables,
ployment variables, and self-rated abilities (Grigorenko & Sternberg, 1997; Zhang &
:rnberg, 1998). For example Sternberg and Grigorenko (1997) found that teachers evaluated
re positively those students whose thinking styles matched their own. Preferences for
ıking styles deserve a greater emphasis since they can be easier to mold than abilities
ernberg, 1997).

Thinking styles differ from abilities. The value of a thinking style is contingent upon the ıvironment and it varies; this is unlike the value of abilities where one ability is consistently ·etter" than another. Thus on ability tests there are "right" and "wrong" answers, but on inking style tests there are merely differing degrees of preferences since there is no right or ·ong. It is postulated that this theory of self-governmental thinking styles can bridge the ychological fields of cognition and personality studies.

her Bridges

However, before continuing to elaborate upon the theory of mental self-government, it ıy be helpful to give a brief overview of the various other propositions that may also bridge rsonality and intelligence. Cantor and Harlow (1994) suggest that *social intelligence* describes w individuals possess unique methods of dealing with the problems of daily living. However, theories where intelligence is defined as adaptation it is necessary to ensure that intelligence d social competence do not become overlapping distinctions (Salovey & Mayer, 1994). On : other hand, Haslam and Baron (1994) suggest that *prudence* describes intelligent behavior d, "involve(s) the balance(d) pursuit of longer-term ends or goals to compose a faculty of good lgment in the face of uncertainty, and to be focally concerned with overcoming impulsive or ›rt-sighted choices" (p. 32). Researchers have also suggested that there are differences ween an *incremental theory* of intelligence where one can manipulate one's intelligence, and *entity theory* where intelligence is fixed (Salovey & Mayer, 1994).

It has been suggested that the integration of personality and intelligence has neglected otions and that psychologists should consider their importance. Emotions are intertwined ›ughout one's functioning and, "the adaptive processing of emotionally relevant information art of intelligence and, at the same time, individual differences in the skill with which such

·ocessing occurs constitute core aspects of personality" (Salovey & Mayer, 1994, p. 311). owever this construct of *emotional intelligence* will be largely omitted from the following scussion on mental self-government due to the fact that emotional intelligence can be either an ›ility or a preference, but thinking styles are only preferences.

Gardner (1983) also posits a theory of multiple intelligences that bridges personality and telligence. He suggests that most roles in life utilize more than one intelligence and that there e divergent ways of understanding intellect. This theorist lists several "intelligences" such as: athematical (abstraction, recognizing and solving problems), spatial (ability to perceive the sual world accurately), body (differentiated and skilled use of the body), and personal nowledge of self and others). He also includes a critiquing intelligence which addresses igher-level" cognitive operations like common sense, originality, metaphoric capacity, and sdom. Finally, there are also linguistic and musical intelligences.

her Thinking Styles

Various cognition-centered thinking styles have been proposed since the 1950's. These :lude category width (Gardner & Schoen, 1962; Pettigrew, 1958), conceptual style (Kagan, ›s & Sigel, 1963), impulsivity-reflectivity (Kagan, 1966), compartmentalization (Messick & ›gan, 1963), conceptual integration (Harvey, Hunt, & Schroder, 1961), tolerance for unrealistic ›eriences (Klein & Schlesinger, 1951), and scanning (Gardner, 1968). Unfortunately, many of ·se studies are dated and they appear to describe cognitive abilities rather than cognitive styles.

On the other hand, the concept of *equivalence range* (Ceci, 1996) looks at how ·ividuals exhibit different tendencies in categorizing behavior, whether they tend towards ·ceiving events as more similar to or more different from each other. Equivalence range is a listic preference, but since differentiation increases with age and expertise it is necessary to

ısure that equivalence range measures preferences in thinking styles rather than cognitive ɔmplexity.

There are still many other thinking styles to be found in the psychological literature. here are Hudson's divergent and convergent thinking styles (1966) and Shouksmith's (1972) lational (female) and abstracting (male) cognitive styles. Harrison and Bramson (1982) ggest five thinking styles called the conflict-oriented synthesist, future-oriented idealist, orkability-oriented pragmatist, rational and logical analyst, and experience-oriented realist. ıere is even the Herrmann Brain Dominance Instrument (as cited in Coulson & Strickland, 983) which measures thinking characteristics associated with hypothesized brain hemispheric ecialization.

However cognition-based theories of thinking styles appear to have numerous fficulties. They are too specific (Grigorenko & Sternberg, 1995; Kogan, 1983), they lack an ganizing theory, and they are not directly applicable to ecologically natural environments. ere also appears to be an inherent bias in some of these categorizations as some cognitive nking styles are "better" than others. Finally, many of these cognitive approaches to thinking les have low convergent validity and confusing findings (Sternberg & Grigorenko, 1997).

Another approach to understanding thinking styles has been from the perspectives of ferent personality theorists. For example, there is the Jungian (Jung, 1923) conceptualization different personality types. The Myers-Briggs Inventory (Myers & Myers, 1980) has erationalized these personality types into sixteen combinations of the following personality ts: sensing or intuiting, thinking or feeling, introverted or extroverted, and judging or ceptive (Myers & Myers, 1980). Similarly, the Gregorc theory of the energic mind suggests r styles: concrete versus abstract and sequential versus random (Gregorc, 1982).

Personality-based theories of thinking styles are more comprehensive than cognition-
ased theories of thinking styles but they are statistically weak and often their factor structures
e not well supported. Their categorizations also do not recognize human flexibility since they
ecast people into rigid "types" without consideration of how individuals vary depending upon
eir interactions with each other or their environment (Sternberg & Grigorenko, 1997). Also,
e distinction between personality traits and thinking styles is sometimes blurred.

Recently, activity-centered theories of thinking styles have developed from the need to
tter deal with educational issues and address individual student differences. Some of these are:
lb, Rubin, and McIntyre's (1974) four learning styles (converging, diverging, assimilating,
d accommodating), Renzulli and Smith's (1978) types of classroom work (project, drill,
itation, peer teaching...), and Dunn and Dunn's (1978) preferred learning situations
vironmental, emotional, sociological and physical). Other researchers have looked at how
rsonality characteristics (Bargar & Hoover, 1984) or psychological difficulties (Meltzer, 1984)
y affect learning. These studies are relevant and empirically supported. However,
igorenko and Sternberg (1995) argue that activity-centered theories of thinking styles are still
dequate since the development of styles is not addressed and the word "style" continues to be
sely defined.

The theory of mental self-government overcomes many of the flaws found in cognitive,
sonality, and activity-based theories of thinking styles. It accounts for internal and social
cesses. Mental self-government provides a unifying model for integrating various thinking
les described by previous theorists while distinguishing them from abilities or personality
ts. It also has demonstrated empirical validity and modern heuristic generativity.

odels of the Mind

Models of the mind offer frameworks for better understanding intelligence and cognitive nctioning. Six such frameworks will be discussed. *Geographic* models of the mind examine ernal processes and attempt to create a map of mind; prominent models are the two-factor, mary mental abilities, structure-of-intellect, hierarchical, and multiple intelligences theories pearman, Thurstone, Guilford, Cattel, Vernon, and Gardner as cited in Sternberg, 1985). In ntrast, *computational* models of the mind focus on, "mental processes, strategies and presentations underlying intelligence" (Sternberg, 1988a, p. 199). This approach examines nstructs such as mental speed and verbal efficiency. Other models of the mind include the *thropological* (which accounts for the environmental context), *biological* (genetic and stemological perspective), and *sociological* (internalization of social processes).

Each of these models of the mind has its own relative strengths and weaknesses. For mple, the geographic model is well operationalized and testable, but it disregards mental cessing; while the computational model examines mental processes to the neglect of looking nental structures. On the other hand, anthropological models recognize the cultural role in ermining intelligent behavior, and they do not detail cognitive functioning. Biological models ognize the importance of development, but the concept of developmental stages is not ngly supported. Finally, the sociological model looks at internalization but does not explain v it takes place.

The theory of mental self-government is also a model of the mind that attempts to lerstand intelligence and it incorporates the geographic, computational, anthropological, logical, and sociological models of the mind. "For example, governments are societal or vidual inventions (anthropological model) that must govern various geographic regions

ographic model) through a set of governmental processes (computational model)" (Sternberg, 38a, p. 200). Mental self-government fits well into the triarchic theory of the mind (Sternberg, 38b) since they both suggest that it is more important to understand the use and application of elligence over understanding the amount of intelligence an individual possesses. The triarchic ory of the mind suggests that there are three types of intelligence. The *componential* aspect of elligence examines the mental processes that underlie behavior; *experiential* intelligence looks he relationship between behavior and individual experience; and *contextual* intelligence derstands that thinking is impacted by the socio-cultural context in which it takes place. elligence is re-defined as the ability to adapt (Sternberg, 1988a)

ntal Self-Government

Finally, we will now turn to the theory of mental self-government as a bridge between sonality and intelligence. This model of thinking underscores the need to understand elligence in its context (Sternberg, 1988a). It suggests that governing systems reflect the ıctioning of the human mind. Humans and governments, "need to marshal their resources, ganize their lives, and set priorities for what they will and will not attend to" (Sternberg, 1997, 152). This theory suggests that there are 13 thinking styles that differ along five dimensions mental self-government: a) functions, b) forms, c) levels, d) scopes, and e) leanings. lividuals choose their cognitive styles of self-management from among these alternatives; nking styles are a blend of personal preferences and environmental demands (Sternberg, 88a; Tourangeau & Sternberg, 1981).

Functions. The three functions in mental self-government are *legislative, executive,* and *licial*. These functions depict the different goals of thinking. An individual with a legislative nking style enjoys being engaged in tasks that require creative strategies; this person would

joy formulating, planning, constructive activities, engaging in unstructured problems, and ing things their own way. Someone with a legislative thinking style could fit well into the ofession of a scientist or artist.

A person with an executive thinking style is more concerned with the implementation of ks within set guidelines and may prefer structured problems (e.g., lawyer or builder of other's signs). Judicial thinkers tend to focus their attention on evaluating the products of other ople's activities, rules, procedures, and existing structures (e.g., judge or critic).

Forms. The four forms in mental self-government are *monarchic, hierarchic, oligarchic,* d *anarchic*. These forms describe how attention can be differently allocated. An individual th a monarchic thinking style enjoys being engaged in tasks that allow them to focus on one ng at a time. These people tend to be motivated by a single goal or need and thus can appear gle minded, driven, and demonstrate low self-awareness as in the case example of Jenny.

In contrast, the case example of Dave underscores the processes of a hierarchic thinker o can distribute his attention and be motivated by several prioritized tasks. People with this le of thinking tend to be decisive and are a good fit for organizations. However, it is possible t a hierarchic thinker can get caught in their hierarchies while a monarchic thinker gets their ks accomplished.

Oligarchic thinkers also work toward multiple objectives during the same time frame, but y may have trouble setting priorities and this sometimes interferes with task completion. ople with this thinking style tend to seek complexity and be tolerant, flexible, and indecisive.

Finally, an individual with an anarchic style enjoys working on projects that would grant ibility as to how the work is done. They may randomly approach projects and be motivated mixed needs/goals or even be unclear on their goals. The anarchic style may appear the least

cessful of all the thinking styles, but this thinking style comes with a high potential for ativity, since diverse information is often incorporated in unique ways.

Levels. The two levels in the theory of mental self-government are the *local* and the *bal.* These levels describe the specificity and detail of the information people think about. neone with a local style enjoys working with specific and pragmatic details, unlike someone h a global style who prefers more abstract ideas.

Scopes and leanings. The *internal* and *external* scope of the theory of mental self- ernment describes people who prefer working independently or in contact with others. ernal thinkers have a tendency towards introversion, task-oriented aloofness, and lower social sitivity, whereas an external thinker would demonstrate the opposite pattern.

Finally, the *liberal* and *conservative* leanings describe individuals who either enjoy elty, ambiguity, and change (liberal) or prefer following existing structures, familiarity and rity (conservative).

e Thinking Styles Inventory

The theory of mental self-government appears to possess scientific worthiness. It appears gant, parsimonious, and internally coherent. Its constructs are clearly defined, measurable, l testable; the Thinking Styles Inventory (Sternberg, 1997) has demonstrated that the theory of ntal self-government is empirically valid. Perhaps even more important is its heuristic fulness and applicability for teachers, students, job-selections and even partner choices ernberg, 1997). In addition the theory of mental self-government has been fruitful in nerating new research.

The Thinking Styles Inventory (TSI) is a questionnaire that measures the 13 thinking les as suggested by the theory of mental self-government. The internal validity of the TSI

nges from .56 (executive) to .88 (global) with a median of .78. Factor analysis of the 13 scales s yielded five factors that accounted for 77% of the variance in the data. The TSI also exhibits ternal validity; it was only found to be correlated with parts of the Myers Briggs Thinking ventory and Gregorc's (1982) measure of mind styles, and not correlated with IQ and grade int average (Sternberg & Grigorenko, 1995). These results support the contention that nking styles are different from abilities and that they lie at the interface between cognition and rsonality.

The theory of mental styles has great utility for understanding educational settings rigorenko & Sternberg, 1997; Sternberg & Grigorenko, 1997). It has been found that teachers lower grade levels are more legislative and less executive than teachers at higher grade levels. der teachers tend to be more executive, local, and conservative than younger teachers are, and se teachers also showed differences in styles across different subject areas. It appears that nking styles change in individuals; an inexperienced teacher may begin with a broad array of proaches, but then settle into established patterns. Still, one cannot rule out cohort effects at s time. It is more interesting to note that the differences in styles correlated with the ideology he school itself. Sternberg and Grigorenko (1995) found that students tended to match their cher's styles and that students who better matched their teacher's styles were more positively luated and received better grades than others did. With this information in mind, it is possible consider the impact that learning styles might have in re-structuring classrooms and other ning environments so as to facilitate and encourage students.

Although the theory of mental self-government seems powerful, Dai and Feldhusen 99) suggest that the relationships between the different styles of the Thinking Styles entory require greater clarification. For example, participants endorsed contradictory

ıinking styles such as the local-global, legislative-liberal, and executive-conservative styles. owever, this may be due to the fact that people do not have merely one static style, but a profile f styles that contextually varies.

> Yet the complexity of the self-system often defies the either-or logic (Csikszentmihalyi, 1993). It is possible that some individuals can be both legislative and executive, local and global, anarchic and hierarchic, depending on the context of a specific task situation. It is also possible that some task situations invite both global and local, and legislative and executive styles. In scientific inquiry, for instance, hypothesis-generating involves the legislative function as well as high levels of abstraction in thinking, while hypothesis-testing demands attention to established rules and procedures, and attention to details. Thus a student with a complex style profile may be more suited to the task demands than student with a self-consistent profile for such an intellectual endeavor. (Dai & Feldhusen, 1999, p. 305)

Dai and Feldhusen also had other criticisms of the theory of mental self-government. ey noted that there were parallels between the Thinking Styles Inventory and Kirton's ovative-adaptive dimension (as cited in Dai & Feldhusen, 1999), Holland's (as cited in Dai & dhusen, 1999) investigative and conventional dimensions, and Costa and McCrae's (as cited)ai & Feldhusen, 1999) openness dimension. They also noted that although the Thinking es Inventory mainly assesses intellectual styles, it still offers some links to personality in its nal and external styles. Lastly, further clarification of the loci of thinking styles is necessary e it is unclear if they do in fact bridge personality and cognition, as hypothesized by ıberg (1997).

Thinking Styles Vary with Context

Thinking styles are preferences in the use of abilities and not the abilities themselves. Thus, a style may or may not match an ability. Sternberg suggests that life choices need to fit an individual's styles and abilities and that, "A match between styles and abilities creates a synergy that is more than the sum of its parts" (Sternberg, 1997, p. 80). Thinking styles are only good or bad depending on its fit with its context.

The theory of mental self-government is adaptable to psychological theories that recognize the interactive and reciprocal influence between humans and their environments. To illustrate, the triarchic theory of human intelligence recognizes that contextually intelligent people capitalize on their strengths and compensate for weaknesses (Sternberg, 1986). Individuals not only bring their preferred styles to a task, but the task may also influence the styles being used.

Sternberg postulated that styles vary across tasks, situations, and personalities. The value of different thinking styles also varies across different situations and eras. According to the theory, styles are socialized (Sternberg, 1997; Sternberg & Ruzgis, 1994), teachable, and the flexibility and strength of these preferences varies across individuals and their life spans. Subsequent research has confirmed this; thinking styles have been found to vary with variables such as age, sex, college class, work and travel experience (Zhang, 1999; Zhang & Sachs, 1997). It is important to recognize that an individual does not utilize one single thinking style, but a profile of styles that may vary with different environmental demands.

Since males and females are socialized differently, gender differences are found in the profiles of thinking styles. Males tend to prefer more legislative, less judicial, more global, and more internal thinking styles than females, but this may change as a person's culture changes.

Men also tend to rate themselves more highly on all the items than women do (Sternberg, 1997). Similarly, age differences in the thinking styles may also be found since legislation seems to be encouraged in preschool young in contrast to executive thinking in older children (Sternberg, 1997).

Different societal institutions value different thinking styles. For example different parents, areas of schooling, and occupations each value different styles. Classes that mostly utilize multiple-choice exams favor executive styles, lectures favor executive and hierarchical styles, co-operative learning favors external thinking styles and reading favors internal and hierarchical styles (Sternberg, 1995, p. 287). Students whose thinking styles match the assessment methods may perform very well. Due to the confusion between ability and styles, people whose styles do not match their contexts are often penalized by being viewed as stupid when it may simply be a mismatch between student and teacher styles. Similarly, performance in the classroom is not necessarily equivalent to career performance. It is suggested that teachers use a variety of methods to evaluate their classrooms since this reduces bias towards student's whose thinking styles best fit a particular assessment style (Sternberg, 1997).

This section of text has described how thinking styles vary across different situations and personalities; thinking styles are socialized and they change across different societal institutions. Culture is a predominant form of socialization. Since thinking styles vary with context, one expects cross-cultural differences. As such, we will now turn to the population of interest and discuss Asian cultural differences and acculturation before examining mental self-government in Asian-Canadians.

Asian American Cultural Differences

Most psychologists recognize that both intelligence and personality are bound by culture (Smirnov, as cited in Salovey & Mayer, 1994). Cultures reward different mental styles. It will be interesting to examine an Asian population since they tend to do well academically regardless of their context, due to their achievement motivation (Bond, 1996). In order to look at the issue of how thinking styles differ cross culturally, it will be necessary to examine the concepts of acculturation and the dimensions of individualism-collectivism.

It has been suggested that individualism-collectivism is, "perhaps the most important dimension of cultural difference in social behavior across the diverse cultures of the world," (Triandis, 1988, p. 60) making it very useful for explaining cross-cultural variation. However, in considering these cultural differences, it is important to recognize the great heterogeneity within cultures on either of these dimensions.

In North America, individualism is rewarded, and its heroes are known for legislative thinking styles that incorporate creative and independent thought (Sternberg, 1997). Individualism describes the importance of each distinct person; thus the values of competitiveness and self-reliance are highlighted. On the other hand, Asian societies tend to be collectivistic (Hofstede, 1984). These cultures place the emphasis on community and interrelatedness over individual functioning. Hofstede (1991) stated the individualism-collectivism dichotomy most succinctly,

> Individualism stands for a society in which the ties between individuals are loose; everyone is expected to look after himself or herself and his or her immediate family only... collectivism stands for a society in which people from birth onwards are

integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty. (p. 260-261)

Acculturation

How do individuals adapt to a new cultural context that is different from the one in which they developed? Acculturation refers to the cultural changes resulting from these encounters. "Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact with subsequent changes in the original culture patterns of either or both groups" (Redfield, Linton, & Herskovits, 1936). These changes tend to induce more change in the acculturating group than the dominant group (Berry, 1980). Acculturation is important to study since it helps to explain within group differences.

Acculturation can be a complex construct. "Our results demonstrate that the psychological construct of acculturation can incorporate important information above and beyond demographic variables. Demographics, although simple and concrete, do not tell the whole story" (Ryder, Alder, & Paulhus, 2000, p. 62). Like thinking styles, preferences for acculturation strategies vary depending on the context. Theorists in this field have moved away from unidimensional models that assume that individuals fall along an identity continuum from Asian to American and the understanding that one loses their cultural heritage as they adapt to the majority culture

Current research (Berry, 1980; Ryder et al., 2000) supports newer bidimensional acculturative theories that see the heritage culture and dominant culture as relatively independent of each other. Thus, one could accept a new culture and maintain one's original cultural identity, one could have multiple important cultural identities, or one could find cultural identity an unimportant aspect of self-definition. It has been suggested that the rate and extent of

acculturation depend on the value in question (Feldman, Mont-Reynaud, & Rosenthal, 1992) and that value acculturation occurs more slowly than behavioral acculturation (Kim, Atkinson, & Yang, 1999). It is also possible that Asian men tend to acculturate less quickly to the majority culture than Asian women (Tang & Dion, 1999).

Acculturating individuals can also be categorized by their different acculturation strategies depending on how they resolve the issues of cultural maintenance (the extent cultural identity is considered important and maintenance is desired) and participation (the extent they should involve themselves with other groups). It is this combination of attitudes and behaviors that makes the four acculturation strategies of Berry (1980): a) integration or biculturalism, b) marginalization, the rejection of both the old and the new culture, c) assimilation, giving up one's ethnic identity, and d) separation, choosing to not interact with host culture.

A brief mention of the Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA; Suinn, Rikard-Figueroa, Lew, & Vigil, 1987) is necessary here. The SL-ASIA has been developed for the purpose of measuring the cognitive, behavioral, and attitudinal components of acculturation in Asian-Americans. This scale was developed from and based upon the Acculturation Rating Scale for Mexican Americans (ARSMA; Cuellar, Harris, & Jasso, 1980). The SL-ASIA scale recognizes that acculturation is multi-faceted, "Multidimensionality simply recognizes that behaviors, values and attitudes are all subject to change or resistance to change in varying degrees" (Suinn, Khoo, & Ahuna, 1995, p. 140). Recent additions to the SL-ASIA better address the bidimensional and non-linear aspects of acculturation and allow for a better reclassification of the data (Ryder et al., 2000). These items open up the possibility that an individual's cultural self-definition may contrast with their behavioral competencies or stated values.

Mental Self-government in Asian Canadians

Since mental styles are socialized, it is hypothesized that as an Asian individual becomes more acculturated to the Anglo-American/Canadian system, his or her thinking styles will approach American norms. In this study, an assumption of cultural equivalence between the United States and Canada is made. The theory of mental self-government has great utility in several contexts; however its cross-cultural validity has only begun to be demonstrated. Understanding thinking styles is important because people try to match their styles to all aspects of life and this may affect their performance (Sternberg, 1985; Sternberg, 1988a). Understanding thinking styles in the context of acculturation is also important since the influence of one's culture is so pervasive it even shapes one's sense of self (Ryder et al., 2000, p. 49).

How might the pattern of thinking styles in Asian-Canadians differ from the European-American population? One would expect to see more conservative and executive styles but fewer anarchic and legislative styles in the Asian collectivistic societies. Thinking styles may also correspond to one's social position; for example lower status individuals may exhibit more executive and hierarchic styles since their role is to implement tasks within set guidelines.

Zhang and Sachs (1997) administered the Thinking Styles Inventory to a Hong Kong student population and found that the internal consistency of 13 scales was similar, and that the correlations were in the expected directions but they were not as high as Sternberg's results (1997). However, they only found three factors that accounted for 66% of the variance (instead of five factors for 77% of the variance; Sternberg, 1997); the forms and levels of mental self-government were not found. Hierarchical and monarchical thinking styles were also positively correlated. The researchers of this study suggest that these results were a product of participants being tested in English, their second language.

In a later study, Zhang (1999) found that the monarchic, anarchic, and local scales require revision for Hong Kong students. The monarchic scale was also unreliable in previous studies (Sternberg, 1997). Perhaps the monarchic scale is weak since it is reinforced in few contemporary social contexts. Similar internal consistency reliabilities for the 13 scales were reported and again it was found that the hierarchical and monarchical thinking styles were also positively correlated. However, this time five factors were extracted. Perhaps the most striking conclusion by Zhang is that thinking styles were not socialized as the thinking styles were found to be uncorrelated with socialization variables. However this finding appears inconsistent with the theory of mental self-government and other reported results in the literature; further clarification on this issue is necessary.

The preceding has been a review of the literature on the interface between intelligence and personality with special reference to the theory of mental self-government. Since the thinking styles postulated by the theory of mental self-government are socialized, it is expected that culture would have a profound effect on thinking style profiles. Although Zhang (1999) and Zhang and Sachs (1997) have attempted to cross-validate the Thinking Styles Inventory in Hong Kong and China (Zhang & Sternberg, 2000), it is important to replicate their results in another sample since their results have been inconsistent and Hong Kong is an atypical Chinese sample as it is a British colony.

Further research in this area is necessary in order to obtain a better understanding of the role of thinking styles in acculturating Asian-Canadians. Thinking styles are robust with strong practical applications in the area of learning. A better understanding of these styles may then drive interventions to help immigrants learn how to acculturate to the majority culture. Since acculturation occurs most quickly among the first generation of Chinese adolescents and then

proceeds more gradually in later generations (Feldman, Mont-Reynaud & Rosenthal, 1992), it should be of most interest to focus upon first generation Asians. It is hypothesized that the profiles of the Thinking Styles Inventory (TSI; Sternberg, 1997) will change and approach American norms as Asian-Canadian participants become more acculturated to the Anglo American/Canadian system. The research in this study begins to address this issue and asks, "Are acculturation and thinking styles related?" Thus the hypotheses of this study are:

- Chinese-Canadians will have a different profile of thinking style preferences in contrast to European-American and Hong Kong samples.
- Thinking style preferences will be related to acculturation.

Chapter 2

Method

Participants

A convenience sample of 68 Chinese-Canadians from the Northwest was recruited by word of mouth. This sample had 31 females (46%) and 37 males (54%), and their ages ranged from 14 to 60 years of age with a mean of 28.7 years and a standard deviation of 13.7 years. All the participants were of Asian descent, the majority being Taiwanese (74%) and Chinese (19%). Participants had been living in North America for 1 to 35 years, the average being 15.8 years. Educationally, 19% of participants had completed some high school, 56% some college, and 18% some graduate level studies. This sample was predominantly Christian (82%) and 13% indicated that they did not subscribe to any particular religion; others reported being Catholic (1%), Buddhist (1%), and Other (1%). All of the participants had an adequate grasp of English to be able to independently complete the questionnaire.

Materials

Subjects completed three self-report measures: a short demographic questionnaire (Appendix B), the Thinking Styles Inventory (Appendix C; Sternberg, 1997), and the Suinn-Lew Asian Self-Identity Acculturation Scale (Appendix D; Suinn et al., 1987). The demographic questionnaire gathered data on age, gender, level of education, occupation, religion, ethnicity, and the number of years lived in Canada.

Thinking Styles Inventory (TSI). The TSI consisted of 104 statements, with eight statements corresponding to each of the 13 different thinking styles. The scores range from 1 (low) to 7 (high) on each item. The internal consistency of the scale ranged from .56 (executive) to .88 (global) with a median of .78 (Sternberg & Wagner, 1991; 1992). The five factors (functions, forms, levels, scopes and leanings) accounted for 77% of the variance of the data in the Anglo standardization. The TSI's correlations with Gregorc's MBTI (1982) were higher than chance but the TSI was not significantly correlated with IQ and GPA (Sternberg & Grigorenko, 1995). It appears that the TSI has external validity and measures something different from personality and intelligence. Still, the judicial, global and liberal styles are correlated with SAT math scores. Most scale intercorrelations are low, and it seems that the legislative and liberal styles tend to be associated, as are the executive and conservative thinking styles. In this study the 13 subscales of the TSI will be used as the dependent variables to measure thinking styles.

Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA). The SL-ASIA recognizes that acculturation is multi-faceted. It consists of 26 multiple-choice questions that cover language familiarity/usage/preference, ethnic and self identity, friendship choice, cultural behaviors, generation, geographic history, attitudes, and values. The score resulting from this test ranges from 1.00 (low acculturation or "very Asian") to 5.00 (high acculturation or "very Anglicized"). The recent addition of the values score, behavioral competencies score, and self-identity score to the SL-ASIA to better address the bidimensional and non-linear aspects of acculturation. The alpha reliability coefficient of this scale is 0.88 (Suinn et al., 1987).

The SL-ASIA was validated in several different samples (Kodama & Canetto, 1995; Ownbey & Horridge, 1998; Suinn, Ahuna, & Khoo, 1992) and by comparison to generational level, place of upbringing, years living in the US, and self-rating (Suinn et al., 1987). An

analysis of variance found generational level to be significant ($F = 7.20, p < .0001$), showing that there was an increase in acculturation scores for each successive Asian-American generation. Participants who lived longer in the United States also showed an increase in acculturation scores ($F = 14.26, p < .00001$). Lastly, scores on an item asking, "How would you rate yourself?" also increased with acculturation scores ($F = 15.55, p < .0001$). In this study the SL-ASIA was used as an attribute measure (normal independent variable) to measure acculturation.

The SL-ASIA was modified to better address the Canadian sample; instances where the word "American" appeared were replaced with the word "Canadian". Thus participants could describe themselves as "Asian-Canadian" or discuss how many generations their family had been in Canada rather than the United States. It was felt that this minor modification would facilitate participant comprehension.

Procedures

Participants were given the questionnaire packet to take home to complete. Although this form of administration is unusual, individual work and test taking in areas that were free from distractions was encouraged and followed-up with. The examiner explained the informed consent (Appendix A) in order to ensure that subjects understood the nature of participation in psychological testing. The examiner also explained the instructions for filling out the questionnaires and any questions were answered at that point. These measures (the demographic questions, the TSI, and the SL-ASIA) took approximately one hour to complete, and the examiner provided a phone number for assistance if necessary. Upon completion of the study, the participants returned the questionnaire to the examiner and were handed a debriefing page (Appendix E) stating the purpose of the study, and also addressed any questions or concerns.

Chapter 3

Results

Internal Validity

The internal consistency of each of the 13 Thinking Style Inventory (TSI) scales was estimated with Cronbach's alpha coefficient. The reliabilities from this study range from .55 (oligarchic) to .88 (hierarchic), with a median of .82. This compares quite closely to Sternberg and Wagner's (1992) results which ranged from .56 (executive) to .88 (global) with a median of .78; and Zhang's (1999) results which ranged from .46 (anarchic) to .89 (conservative) with a median of .71. Our results are available in Table 1. Our lowest alpha reliability scores were for the executive scale (0.56) and oligarchic scale (0.55). This contrasts with previous suggestions that the monarchic, anarchic, and local subscales need to be revised (Zhang & Sachs, 1997).

Scale Intercorrelations

The inter-scale Pearson correlation matrix of the 13 TSI scales is reported in Table 2. The absolute values of these correlations ranged from .00 to .52. Zhang (1999) obtained correlation values between .00 to .73. Some of the correlations were in the direction predicted by the theory of mental self-government and consistent with other reported correlations in the literature. For example, legislative versus liberal ($r = .48, p < 0.01$), and internal versus external ($r = -.43, p < 0.01$). Although there were other observed correlations that did not support the predictions of the theory of mental self-government, these were not significant. To illustrate, we

Table 1

Alpha Coefficients in Different Samples

Thinking Style	Tang, 2003	Zhang & Sachs, 1997	Zhang, 1999
Legislative	0.86	0.66	0.70
Executive	0.56	0.71	0.63
Judicial	0.82	0.70	0.71
Monarchic	0.79	0.59	0.56
Hierarchical	0.88	0.79	0.81
Oligarchic	0.55	0.82	0.79
Anarchic	0.62	0.54	0.46
Local	0.79	0.58	0.53
Global	0.72	0.61	0.58
Internal	0.84	0.75	0.76
External	0.86	0.76	0.80
Liberal	0.88	0.80	0.85
Conservative	0.86	0.87	0.89

found a small correlation between monarchic and hierarchic thinking styles, whereas the literature (Zhang, 1999; Zhang & Sternberg, 1998; Zhang & Sachs, 1997) has found significant correlations that are inconsistent with the theory.

Factor Analysis

A scale level factor analysis was completed using the principal component analysis extraction method. In this Chinese-Canadian sample three factors with eigenvalues greater than one were identified; together they accounted for 55.2% of the variance of the thirteen scales. Please refer to Table 3. Based on the data, none of the factor solutions worked very well, but the forced three factor solution is the best from a statistical standpoint. Factor 1 included the legislative, executive, judicial, hierarchical, and anarchic thinking styles; Factor 2 included external (negative) and conservative thinking styles; and Factor 3 included the local (negative) and global thinking styles. The monarchic, internal, liberal, and oligarchic thinking styles do not appear to load cleanly on a single factor. Thus from this data the functions (legislative, executive, and judicial) and the levels (local and global) of the theory of mental self-government load well on separate factors, but the forms (monarchic, hierarchic, oligarchic, and anarchic), scopes (internal and external), and leanings (liberal and conservative) are less clear. This data does not fit well with Sternberg's theory; in his original standardization sample (Sternberg & Wagner, 1992) five factors (functions, forms, levels, scopes and leanings) were found to account for 77% of the variance.

Other researchers have also reported that their factor analyses have not been supportive of the theory of mental self-government's structure. Some have found that the legislative-executive and liberal-conservative dimensions overlapped (Sternberg & Grigorenko, 1997), and

Table 2

Pearson Correlation Matrix for the TSI Scales

	Legislative	Executive	Judicial	Monarchic	Hierarchic	Oligarchic
Legislative						
Executive	.17					
Judicial	.41**	.39**				
Monarchic	.25*	.26*	.25*			
Hierarchic	.28*	.15	.41**	.21		
Oligarchic	.04	.00	.35**	.03	.22	
Anarchic	.29*	.08	.43**	.21	.25*	.35**
Local	.12	.14	.26*	.46**	.00	-.05
Global	.11	.17	.06	.12	.17	.28*
Internal	.37**	.09	.24	.51**	.18	.01
External	.09	.15	.26*	-.19	.28*	.42**
Liberal	.48**	.21	.38**	.03	.29*	.17
Conservative	-.19	.19	.04	.52**	.16	.01

Table 2 *(continued)*

Pearson Correlation Matrix for the TSI Scales

	Anarchic	Local	Global	Internal	External	Liberal
Local	.17					
Global	.28*	-.20				
Internal	.33**	.22	.35**			
External	.23	.04	.02	-.43**		
Liberal	.28*	.20	-.04	.03	.42**	
Conservative	.10	.13	.25*	.37**	-.11	-.32**

*$p < 0.05$. **$p < 0.01$.

Table 3

Scale-level Factor Analysis for the TSI Scales

	Factor 1	Factor 2	Factor 3
Legislative	0.61		-0.34
Executive	0.44		
Judicial	0.75		
Monarchic	0.55	0.60	
Hierarchic	0.58		
Oligarchic	0.41	-0.35	0.54
Anarchic	0.65		
Local	0.38		-0.56
Global	0.35		0.67
Internal	0.53	0.63	
External		-0.72	
Liberal	0.53	-0.54	-0.35
Conservative		0.67	0.33
% Variance	25.61	17.68	11.92
Cumulative %	25.61	43.29	55.21
Eigenvalue	3.33	2.30	1.55

Note. Variables with factor loadings of less than +/- .30 have been omitted.

Table 4

Comparison of TSI Scale-level Factor Analyses across Different Samples

	Tang (2003)	Zhang & Sachs (1997)	Dai & Feldhusen (1999)	Sternberg & Grigorenko (1997)
Factor 1				
	Legislative (0.61)	-	Legislative	Legislative (-0.78)
	Executive (0.44)	Executive (0.87)	-	Executive (0.58)
	Judicial (0.75)	-	Judicial	-
	Hierarchical (0.58)	-	-	-
	Anarchic (0.65)	-	Anarchic	-
	-	Oligarchic (0.73)	-	-
	-	Monarchic (0.64)	-	-
	-	-	Internal	-
	-	-	Local	-
	-	Conservative (0.90)	-	Conservative (0.87)
	-	-	Liberal	Liberal (-0.81)
Factor 2				
	-	Legislative (0.77)	-	-
	-	-	Executive	-
	-	-	-	Judicial (0.70)

Table 4 *(continued)*

Comparison of TSI Scale-level Factor Analyses across Different Samples

	Tang (2003)	Zhang & Sachs (1997)	Dai & Feldhusen (1999)	Sternberg & Grigorenko (1997)
Factor 2				
	-	-	-	Oligarchic (0.70)
	-	Anarchic (0.64)	-	-
	-	-	Monarchic	-
	-	-	Hierarchic	-
	-	Local (0.51)	-	-
	Conservative (0.67)	-	Conservative	-
	External (-0.72)	-	-	-
	-	Internal (0.80)	-	-
Factor 3				
	-	Hierarchical (0.57)	-	-
	-	External (0.87)	External	External (0.72)
	-	-	Internal	Internal (-0.80)
	Local (-0.56)	-	-	-
	Global (0.67)	Global (0.49)	-	-

Table 4 *(continued)*

Comparison of TSI Scale-level Factor Analyses across Different Samples

	Tang (2003)	Zhang & Sachs (1997)	Dai & Feldhusen (1999)	Sternberg & Grigorenko (1997)
Factor 4				
	-	-	-	Local (0.92)
	-	-	-	Global (-0.82)
Factor 5				
	-	-	-	Hierarchic (0.86)

others also found only three factors (Dai & Feldhusen, 1999; Zhang & Sachs, 1997). Please refer to Table 4 for a comparison of factor analyses across different studies.

Comparison of Means

Means from the present sample were compared with those from Zhang and Sachs (1997) and Zhang (1999); the data from Sternberg and Wagner's (1991; 1992) normative European-American sample were unavailable at this time. In the Zhang and Sachs (1997) study, 92 University of Hong Kong students participated; 30 were male, 58 were female, and their ages ranged from 19 to 50 years. 35 respondents were teachers with experience ranging from 2 to 25 years. In Zhang's (1999) sample, 151 University of Hong Kong students participated; 57 were male, 88 were female, and their ages also ranged from 19 to 50 years. 80 respondents were from the education faculty and 71 from the business school. On average participants had traveled to 10 cities other than Hong Kong (ranging from 1 to 57 cities), and had 11.8 years of work experience (ranging from 2 to 26 years).

The values in Table 5 suggest that this Chinese-Canadian sample was somewhat different from those reported in the literature, as 11 of 26 *t*-test comparisons were significant. Chinese-Canadians significantly preferred the legislative, executive, local, and liberal thinking styles in contrast to Hong Kong samples. Our sample also preferred the conservative thinking style more than Zhang's (1999) sample, and they also reported an increased preference for anarchic thinking style and a reduced preference for the oligarchic thinking style compared to Zhang and Sachs' (1997) sample.

Table 5

Student's t-*values Comparing Hong Kong and Chinese-Canadian Samples.*

Thinking Style	Tang (2003)		Zhang (1999)		Zhang & Sachs (1997)	
	Mean	SD	Mean	T-value	Mean	T-value
Legislative	5.12	0.99	4.67	3.38**	4.49	4.30**
Executive	5.12	0.89	4.53	4.70**	4.65	3.22**
Judicial	4.62	0.99	4.70	-0.62	4.57	0.34
Monarchic	4.19	1.06	4.21	-0.17	4.47	-1.77
Hierarchic	5.06	1.07	4.99	0.43	4.89	1.00
Oligarchic	4.33	0.76	4.55	-1.71	4.66	-2.24*
Anarchic	4.59	0.80	4.38	1.92	4.32	2.21*
Local	4.51	0.93	4.18	2.72**	4.09	2.91**
Global	4.40	0.88	4.23	1.47	4.50	-0.83
Internal	4.32	1.11	4.10	1.36	4.06	1.46
External	5.00	1.00	4.96	0.29	4.79	1.29
Liberal	5.04	0.99	4.56	3.21**	4.25	4.99**
Conservative	4.29	0.98	3.97	1.97*	4.23	0.33

*$p < 0.05$. **$p < 0.01$.

Gender

Gender was found to be significantly correlated with several thinking styles: monarchic (r = -.47, p < 0.01), local (r = -.28, p < 0.05), internal (r = -.44, p < 0.01), and external (r = .34, p < 0.01). Further analyses compared means for males and females. Results indicated that females scored higher on the external thinking style ($t(65.70) = -2.99$, $p < .004$) and males scored higher on the monarchic ($t(60.21) = 4.24$, $p < 0.001$), local ($t(63.53) = 2.32$, $p < 0.023$), and internal ($t(60.51) = 4.09$, $p < 0.001$) thinking styles. Gender was found to account for 37% of the variance in the Thinking Styles Inventory in this sample, in contrast to the SL-ASIA for which gender only accounted for less than 1% of the variance in acculturation.

These results suggest that Chinese-Canadian males tend to focus on one thing at a time, observe pragmatic details, and are more introverted. This profile of preferences is distinct from European-American males (Sternberg, 1997) who prefer more legislative, global, and internal thinking styles than women. Additionally, women in this study endorsed more external thinking styles than men did; this makes intuitive sense since women are traditionally more socially sensitive.

Age

Significant correlations were also found between age and executive thinking (r = .24, p < 0.05), judicial thinking (r = .29, p < 0.05), and hierarchic thinking (r = .32, p < 0.01). Further analyses with linear regression indicated that age was a significant predictor of the following: executive ($\beta = 0.24$, $F(1, 66) = 3.99$, $p < 0.05$), judicial ($\beta = 0.29$, $F(1, 66) = 6.25$, $p < 0.01$), hierarchic ($\beta = 0.30$, $F(1, 66) = 6.55$, $p < 0.01$), anarchic ($\beta = 0.24$, $F(1, 66) = 4.17$, $p < 0.05$), and SL-ASIA ($\beta = -0.30$, $F(1, 66) = 6.52$, $p < 0.01$). However the effect sizes were very small

(R^2 ranged from 0.06 to 0.09). Zhang (1999) also found that thinking styles were significantly influenced by age.

Other Demographic Variables

Education was correlated with hierarchic thinking ($r = .34$, $p < 0.01$) and local thinking ($r = .25$, $p < 0.05$). And the number of years a participant lived in North America was also correlated with executive thinking ($r = .25$, $p < 0.05$) and hierarchic thinking ($r = .27$, $p < 0.05$).

SL-ASIA

The alpha reliability coefficient of the SL-ASIA is .90. The average acculturation score was 2.87 (SD 0.68) where a score of 1.00 indicates low acculturation or "very Asian" and a score of 5.00 suggests high acculturation or "very Anglicized". For the values score, 24% endorsed Asian values, 51% bi-cultural values, and 21% western values. For the behavioral competencies score, 21% reported Asian behaviors, 60% bi-cultural behaviors, and 13% western behaviors. Finally, for the self-identity score, 18% of participants considered themselves basically Asian, 12% basically Canadian, and 38% a blend of both. Other participants considered themselves "Asian-Canadian" but deep down were Asian first (26%), whereas other Asian-Canadians indicated that they were Canadian first (6%).

Table 6

Pearson Correlation Matrix for Demographic Variables and the TSI Scales

	Age	Gender	Education	Years in Canada
Legislative	0.12	-0.16	0.12	0.00
Executive	0.24*	-0.22	0.21	0.25*
Judicial	0.29*	-0.21	0.23	0.10
Monarchic	0.12	-0.47**	0.09	-0.01
Hierarchic	0.32**	-0.02	0.34**	0.27*
Oligarchic	-0.06	0.06	-0.17	-0.03
Anarchic	0.18	-0.13	-0.05	0.15
Local	0.23	-0.28*	0.25*	0.09
Global	0.00	-0.16	-0.20	0.08
Internal	-0.03	-0.44**	0.09	0.04
External	0.11	0.34**	0.07	0.17
Liberal	0.16	0.02	0.14	0.05
Conservative	0.04	-0.19	0.03	0.08

*$p < 0.05$. **$p < 0.01$.

The SL-ASIA score was correlated with age ($r = -.43, p < 0.01$) the number of years a participant lived in North America ($r = .44, p < 0.01$). The SL-ASIA values score was found to be correlated with education ($r = -.34, p < 0.01$) and age ($r = -.31, p < 0.01$), but independent of the SL-ASIA total score and SL-ASIA behavioral competencies score.

No significant correlations were found between the SL-ASIA scores and the TSI subscales (see Table 6). Thus these results do not support the hypothesis that acculturation is related to thinking styles. As such, a principal component factor analysis of the SL-ASIA was utilized to extract six factors that were found to account for 63% of the variance (see Table 7). In this manner some significant 2-tailed correlations were found between acculturation and the TSI (see Table 8). For example, factor 4 (Asian self-esteem) was correlated with global thinking ($r = -.25, p < 0.05$), factor 5 (cultural contact) was correlated with internal thinking ($r = .25, p < 0.05$) and external thinking ($r = -.27, p < 0.05$), and factor 6 (cultural values) was correlated with judicial thinking ($r = .24, p < 0.05$) and hierarchic thinking ($r = .31, p < 0.01$). The other unrelated factors seemed to examine the behavioral aspects (factor 1), current associations (factor 2), and family of origin (factor 3) of acculturating individuals.

Table 7

Pearson Correlation Matrix for SL-ASIA and the TSI Scales

	Acculturation	Values	Behavior	Self-Identity (nominal)
Legislative	-0.06	0.02	-0.18	-0.06
Executive	-0.12	-0.18	-0.03	-0.10
Judicial	-0.18	-0.13	0.02	-0.05
Monarchic	-0.09	0.02	0.18	-0.05
Hierarchic	-0.04	-0.06	0.03	0.23
Oligarchic	-0.02	0.09	-0.02	0.14
Anarchic	-0.08	0.07	-0.04	0.02
Local	-0.01	0.05	0.11	-0.10
Global	-0.12	0.04	-0.07	-0.05
Internal	0.01	0.04	0.10	-0.22
External	-0.03	-0.03	-0.09	0.11
Liberal	-0.09	-0.00	0.01	0.14
Conservative	-0.02	0.09	0.23	-0.08

*$p < 0.05$. **$p < 0.01$.

Table 8

Factor Analysis for SL-ASIA Items

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
1	0.80	-	-	-	-	-
2	0.84	-	-	-	-	-
3	-	-	-	0.42	-	0.31
4	0.35	-	-0.78	0.35	-	-
5	0.38	-	-0.79	-	-	-
6	0.68	-	-	-	-	-
7	0.75	-	-	-	-	-
8	0.39	0.70	-	-	-	-
9	0.35	0.65	-	-	-	-
10	0.77	-	-	-	-	-
11	0.68	-	-	-	-	-
12	0.43	-0.37	-	-	-	-
13	0.85	-	-	-	-	-
14	0.37	-0.47	-	-	0.53	-
15	0.36	-	0.55	0.32	-	-
16	0.39	-	0.41	-	-	-
17	0.90	-	-	-	-	-

Table 8 *(continued)*

Factor Analysis for SL-ASIA Items

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
18	0.93	-	-	-	-	-
19	-	0.39	-	0.57	0.40	-
20	0.77	-	-	-	-	-
21	0.40	-	-	-	0.51	-0.39
22	-	-	-	-	-	0.55
23	-	-	-	-0.35	-	-0.48
24	-	-0.54	-	0.50	-	-
25	-	-	0.41	0.32	-0.36	0.39
26	0.59	-	-0.32	-	-	0.35
% Variance	37.17	9.59	9.07	6.47	5.66	4.88
Cumulative %	37.17	46.76	55.83	62.29	67.95	72.82
Eigenvalue	7.81	2.01	1.90	1.36	1.19	1.02

Note. Variables with factor loadings of less than +/- .30 have been omitted.

Table 9

Pearson Correlation Matrix for SL-ASIA Factors and the TSI Scales

	F1	F2	F3	F4	F5	F6
Legislative	-0.10	0.22	0.11	0.16	0.01	0.21
Executive	-0.12	-0.14	-0.03	-0.01	0.05	0.20
Judicial	-0.18	-0.07	0.03	-0.03	-0.20	0.24*
Monarchic	-0.10	-0.00	-0.07	-0.05	0.09	0.01
Hierarchic	-0.05	-0.02	0.15	-0.11	-0.10	0.31**
Oligarchic	0.05	-0.05	-0.09	-0.13	-0.20	-0.02
Anarchic	-0.06	-0.09	-0.05	-0.10	0.05	-0.09
Local	-0.04	0.15	-0.07	0.04	0.17	0.15
Global	-0.07	0.04	-0.17	-0.25*	0.02	0.10
Internal	-0.01	0.04	-0.07	-0.04	0.25*	0.15
External	0.03	-0.01	0.04	-0.22	-0.27*	0.16
Liberal	-0.07	0.02	-0.03	-0.03	0.04	0.19
Conservative	-0.00	-0.07	-0.12	-0.21	0.02	-0.07

*$p < 0.05$. **$p < 0.01$.

Chapter 4

Discussion

This Study

Results indicated that the Thinking Styles Inventory had marginal to good internal consistency in measuring the thirteen different thinking styles in a Chinese-Canadian population. Our internal consistency is similar to previous studies (Sternberg & Wagner, 1992; Zhang, 1999), although the present data suggest that the executive and oligarchic subscales may need to be revised in this sample rather than the monarchic, anarchic, and local subscales as reported in the literature.

The patterns of intercorrelations between the various thinking styles were also in the anticipated directions. For example, the internal versus external scopes ($r = -.43, p < 0.01$) and the liberal versus conservative leanings ($r = -.32, p < 0.01$) demonstrated an inverse relationship. However the negative correlation between the local and global levels ($r = -.20$) did not reach significance. The theory of mental self-government suggests that thinking styles are not mutually exclusive; for example one could be a legislative thinker in some situations but a judicial thinker in another scenario. Thinking style intercorrelations within the functions and forms supported this idea. Other anticipated intercorrelations were between the legislative and liberal thinking styles ($r = .48, p < 0.01$); individuals who enjoy developing creative strategies will also demonstrate a preference for novelty. Similarly, participants who tend to approach

tasks randomly will report an increased preference for abstract concepts and ambiguity (anarchic with global and liberal, $r = .28, p < 0.05$ for both); or those who prefer to focus on a single goal report a preference for existing structures and clarity (monarchic and conservative, $r = .52, p < 0.01$).

Generally, factor solutions did not work well with the current data. Factor analysis yielded three factors that accounted for 55% of the variance; there seems to be a strong general factor that accounts for half of the variance measured by the TSI. This data parallels information on the structure of intelligence as there appears to be a strong general factor with several main sub-factors and a larger number of smaller factors at a level below these. It is possible that a hierarchical solution might be more effective. The monarchic, internal, liberal, and oligarchic thinking styles did not load cleanly on single factors.

The current three factor results contrast with the five factors hypothesized by the theory of mental self-government. Other researchers have also found that their factor analyses were not supportive of the theory's structure (Dai & Feldhusen, 1999; Sternberg & Grigorenko, 1997; Zhang & Sachs, 1997). Perhaps the internal validity of this instrument requires greater theoretical clarification. Although the individual thinking styles may be valid measures, it is difficult to consistently group them into higher order forms, functions, levels, scopes, and leanings. It appears that various samples offer unique groupings of thinking styles and individuals do not seem to fall into easy categorizations.

The literature on whether the theory of mental self-government is related to socialization variables such as age, gender, or teaching styles, has been inconsistent (Sternberg & Grigorenko, 1995; Zhang, 1999; Zhang & Sachs, 1997). This study has found some significant relationships between socialization variables and thinking styles. For example, Chinese-Canadian males tend

to score higher on monarchic, local, and internal thinking styles; they tend to focus on one thing at a time, observe pragmatic details, and are more introverted. This profile of preferences is distinct from European-American males (Sternberg, 1997) who prefer more legislative, global, and internal thinking styles than women. Additionally, women endorsed more external thinking styles than men did in this study. This makes intuitive sense since women are traditionally more socially sensitive.

Hierarchic thinking, the ability to prioritize and be decisive, occurred more often in participants who were older, more educated, and who had lived longer in North America. Another relatively straightforward relationship was the prevalence of executive and judicial thinking styles in older individuals since this type of thinking is encouraged in adults. Executive thinking styles were also correlated with the number of years a person had been in North America. Also, increased education was correlated with local thinking; generally an ability to focus on specific and pragmatic details is conducive to successful studying habits.

Another important socialization variable is culture. This study demonstrated that Chinese-Canadians significantly preferred the legislative, executive, local, and liberal thinking styles in contrast to Hong Kong samples. This sample also preferred the conservative thinking style more than Zhang's (1999) sample, and they also reported an increased preference for the anarchic thinking style and a reduced preference for the oligarchic thinking style compared to Zhang and Sachs' (1997) sample.

The relationship between the TSI and socialization variables has been mixed. Although this study found cultural differences for thinking style preferences between Hong Kong and Chinese-Canadian samples, it did not find any relationship between acculturation and the TSI. The literature on whether the theory of mental self-government is related to socialization

variables such as age, gender, or teaching styles has also been inconsistent; for example, Zhang and Sachs (1997) and Zhang (1999) found contradictory results even though both samples were University of Hong Kong students.

Finally, the data in this study do not support the hypothesis that Chinese-Canadian acculturation is related to participants' style of mental self-government. Although the TSI and SL-ASIA were both internally consistent, there were no significant correlations between these two measures. No data were obtained that supported the hypothesized link between thinking styles and acculturation.

However a factor analysis of the SL-ASIA found some factors that were related to thinking styles. The first three factors, behavior (factor 1), current associations (factor 2), and family of origin (factor 3) did not correlate with any of the thinking styles. On the other hand, Asian self-esteem (factor 4) was correlated with global thinking ($r = -.25, p < 0.05$), cultural contact (factor 5) was correlated with internal thinking ($r = .25, p < 0.05$) and external thinking ($r = -.27, p < 0.05$), and cultural values (factor 6) was correlated with judicial thinking ($r = .24, p < 0.05$) and hierarchic thinking ($r = .31, p < 0.01$). Thus the data on whether acculturation is related to thinking styles is somewhat unclear.

The complexity of these results is understandable considering these constructs; acculturation has been shown to be multi-faceted and there are numerous possibilities of thinking style profiles. In addition, individuals may diversify their thinking styles to better adapt to an environment, further complicating the matter. It is of interest to note that despite the lack of relationship between these two measures, the number of years an individual was in North America was related to scores on both the TSI (executive thinking, $r = .25, p < 0.05$, and hierarchic thinking, $r = .27, p < 0.05$) and the SL-ASIA ($r = .44, p < 0.01$).

To return to the original hypotheses, this sample of Chinese-Canadians was found to have a different profile of thinking style preferences in contrast to Hong Kong samples. At this time, data on European-Americans was not available and a determination could not be made on if their profile of thinking styles differs from Chinese-Canadians. Another hypothesis was that thinking style preferences would be related to acculturation, but the data garnered from this research did not support a relationship between these two variables.

Limitations

Still, these measures of thinking styles and acculturation are imperfect. Criticisms about the TSI have been previously discussed (see pages 13 and 14) and questions have also been raised about the SL-ASIA measure. Although the SL-ASIA has some evidence of validity, its five factors are weak (Suinn et al., 1992) and its criterion validity only has, "minor to moderate support" (Ponterotto, Baluch, & Carielli, 1998, p. 116). It also seems inconsistent to have only one simplistic acculturation score for a multi-dimensional concept (Ponterotto et al., 1998).

Another limitation to this study is its restricted sample for testing the relationship between acculturation and the theory of mental self-government; it is suggested that further endeavors expand the sample to include other acculturating populations. This sample was also not representative due to the high proportion of participants who reported a Protestant/Christian belief (82%) and there may be a cultural difference in individuals who choose to volunteer for psychological testing. Participants in this sample were also selective due to the word of mouth recruitment method. Additionally, the testing in this study could have been better controlled if participants were required to complete the assessment under examiner proctorship.

This research assumes cultural equivalence between the United States and Canada. Although these two cultures are strikingly similar, it could be argued that Canadians have a more

liberal perspective due to universal health care and different laws. There is a paucity of research in this area and this should be addressed in future endeavors. Similarly, this study has not distinguished between Chinese and Taiwanese participants and it is not known if there are important differences between these two similar cultures.

Applications

Having an appreciation for the theory of mental self-government may have applications for psychotherapy. Understanding thinking styles can facilitate effective learning and treatment; for example a client with a monarchic thinking style may have difficulty adapting to a therapist who sets hierarchic goals. The onus is on clinicians to adapt to client needs. Thinking styles may also facilitate normalization and the reduction of pathologizing; rather than perceiving a client as mired in details, one can describe the client as engaging in a preferred style of thinking (local).

Psychologists need to recognize this diversity and engage in careful individual assessment in order to tailor services to meet unique client needs. One cannot simply assume that an highly acculturated individual has thinking styles that are similar to the majority population. Therapists could help their clients contrast various thinking styles in order to develop strategies for coping with their current environment. One could also capitalize on preferred thinking styles to compensate for weaknesses.

Further Research

As previously mentioned, future research with the TSI should expand to include more diverse populations. Different cultural groups can be included in the study of the theory of mental self-government; one wonders if there are unique patterns of thinking styles for different cultures, and does the TSI measure continue to maintain its internal consistency if translated into

other languages? Additionally, other measures of clarifying cultural differences could be used. Better normative data on the Anglo American sample also needs to be available and it appears that some parts of the TSI require modification. It would be beneficial also to apply the theory of mental self-government in educational or therapeutic situations; for example does performance improve if a thinking style is matched to an assessment method? Additionally, could psychotherapy facilitate acculturation by teaching about thinking styles? Thinking styles have been applied in the areas of education, occupation selection, intellectual and interpersonal development. Perhaps further research in these areas may shed new light on the complexity of thinking styles, acculturation, and Chinese-Canadians.

Conclusions

The present data has demonstrated the internal consistency of the TSI but it has also given further weight to prior misgivings about the validity and practical utility of this measure. While significant, regressions on demographic variables accounted for so little of the variance that they were of little value. One important finding was that scores on the TSI were different for this Chinese-Canadian sample than for Zhang (1999) and Zhang and Sachs (1997). This finding suggests that thinking style differences do exist and that they may be important. To return to the opening question, "Do Chinese-Canadians think differently?" The response would be: Yes. The data indicate that this population has some different preferences in thinking styles. Still, the results from this study did not provide support for the hypothesis that Chinese-Canadian acculturation is related to the theory of mental self-government. Perhaps the complex and dynamic nature of acculturation and thinking styles do not allow for simple categorization. People are just too diverse.

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Appendix A

Informed Consent for Participation

Informed Consent for Participation

I (please print your name here)_____ understand that I am participating in the research project of a graduate student in clinical psychology. As a participant I will answer some questions about my thinking styles and my background. I understand that I may stop the testing at any time. I also understand that all the data will be kept confidential; there will be no reference to my name on any materials.

I understand that I may contact Jenny Huang at 737-7526 anytime I have questions or concerns about my participation.

Signature of participant_____ Date_____

Appendix B

Demographic Questionnaire

Demographic Questionnaire

Please fill in the blanks or check one of the boxes for each question below:

1. How old are you? _____

2. What is your gender?

- ❑ Male
- ❑ Female

3. What is your highest level of education?

- ❑ High School
- ❑ Some College
- ❑ College Degree
- ❑ Graduate Level
- ❑ Professional Degree
- ❑ Diploma
- ❑ Other: _____

4. What is your occupation? _____

5. What is your religion?

- ❑ Catholic
- ❑ Protestant (Presbyterian, United, etc…)
- ❑ Buddhist
- ❑ None
- ❑ Other: _____

6. How many years have you lived in Canada? _____

7. What is your ethnicity? _____

Appendix C

Thinking Styles Inventory

Thinking Styles Inventory

Instructions for Stylistic Self-Assessment

Read each statement carefully and decide how well it describes you. Use the scale provided to indicate how well the statement fits the way you typically do things on the job, at home, or at school. Write 1 if the statement does *not* fit you at all, that is, you almost never do things this way. Write 7 if the statement fits you extremely well, that is, you almost always do things this way. Use the values in between to indicate that the statement fits you in varying degrees.

There are, of course, no right or wrong answers. Please read each statement and circle next to the statement the scale number that best indicates how well the statement describes you. Proceed at your own pace, but do not spend too much time on any one statement.

Not at all well — Somewhat well — Extremely well

1 2 3 4 5 6 7 When making decisions, I tend to rely on my own ideas and ways of doing things.

1 2 3 4 5 6 7 When faced with a problem, I use my own ideas and strategies to solve it.

1 2 3 4 5 6 7 I like to play with my ideas and see how far they go.

1 2 3 4 5 6 7 I like problems where I can try my own way of solving them.

1 2 3 4 5 6 7 When working on a task, I like to start with my own ideas.

1 2 3 4 5 6 7 Before starting a task, I like to figure out for myself how I will do my work.

(appendix continues)

Appendix C

Thinking Styles Inventory

Not at all well — Somewhat well — Extremely well

1 2 3 4 5 6 7 I feel happier about a job when I can decide for myself what and how to do it.

1 2 3 4 5 6 7 I like situations where I can use my own ideas and ways of doing things.

1 2 3 4 5 6 7 When discussing or writing down ideas, I follow formal rules of presentation.

1 2 3 4 5 6 7 I am careful to use the proper method to solve any problem.

1 2 3 4 5 6 7 I like projects that have a clear structure and a set plan and goal.

1 2 3 4 5 6 7 Before starting a task or project, I check to see what method or procedure should be used.

1 2 3 4 5 6 7 I like situations in which my role or the way I participate is clearly defined.

1 2 3 4 5 6 7 I like to figure out how to solve a problem following certain rules.

1 2 3 4 5 6 7 I enjoy working on things that I can do by following directions.

1 2 3 4 5 6 7 I like to follow definite rules or directions when solving a problem or doing a task.

1 2 3 4 5 6 7 When discussing or writing down ideas, I like criticizing others' ways of doing things.

1 2 3 4 5 6 7 When faced with opposing ideas, I like to decide which is the right way to do something.

1 2 3 4 5 6 7 I like to check and rate opposing points of view or conflicting ideas.

1 2 3 4 5 6 7 I like projects where I can study and rate different views and ideas.

(appendix continues)

Appendix C

Thinking Styles Inventory

Not at all well Somewhat well Extremely well

1 2 3 4 5 6 7 I prefer tasks or problems where I can grade the design or methods of others.

1 2 3 4 5 6 7 When making a decision, I like to compare the opposing points of view.

1 2 3 4 5 6 7 I like situations were I can compare and rate different ways of doing things.

1 2 3 4 5 6 7 I enjoy work that involves analyzing, grading, or comparing things.

1 2 3 4 5 6 7 When talking or writing about ideas, I stick to one main idea.

1 2 3 4 5 6 7 I like to deal with major issues or themes, rather than details or facts.

1 2 3 4 5 6 7 When trying to finish a task, I tend to ignore problems that come up.

1 2 3 4 5 6 7 I use any means to reach my goal.

1 2 3 4 5 6 7 When trying to make a decision, I tend to see only one major factor.

1 2 3 4 5 6 7 If there are several important things to do, I do the one most important to me.

1 2 3 4 5 6 7 I like to concentrate on one task at a time.

1 2 3 4 5 6 7 I have to finish one project before starting another one.

1 2 3 4 5 6 7 I like to set priorities for the things I need to do before I start doing them.

1 2 3 4 5 6 7 In talking or writing down ideas, I like to have the issues organized in order of importance.

1 2 3 4 5 6 7 Before starting a project, I like to know the things I have to do and in what order.

(appendix continues)

Appendix C

Thinking Styles Inventory

Not at all well — Somewhat well — Extremely well

1 2 3 4 5 6 7 In dealing with difficulties, I have a good sense of how important each of them is and what order to tackle them in.

1 2 3 4 5 6 7 When there are many things to do, I have a clear sense of the order in which to do them.

1 2 3 4 5 6 7 When starting something, I like to make a list of things to do and to order the things by importance.

1 2 3 4 5 6 7 When working on a task, I can see how the parts relate to the overall goal of the task.

1 2 3 4 5 6 7 When discussing or writing down ideas I stress the main idea and how everything fits together.

1 2 3 4 5 6 7 When I undertake some task, I am usually equally open to starting by working on any of several things.

1 2 3 4 5 6 7 When there are competing issues of importance to address in my work, I somehow try to address them simultaneously.

1 2 3 4 5 6 7 Usually when I have many things to do, I split my time and attention equally among them.

(appendix continues)

Appendix C

Thinking Styles Inventory

Not at all well — Somewhat well — Extremely well

1 2 3 4 5 6 7 I try to have several things going on at once, so that I can shift back and forth between them.

1 2 3 4 5 6 7 Usually I do several things at once.

1 2 3 4 5 6 7 I sometimes have trouble setting priorities for multiple things that I need to get done.

1 2 3 4 5 6 7 I usually know what things need to be done, but I sometimes have trouble deciding in what order to do them.

1 2 3 4 5 6 7 Usually when working on a project, I tend to view almost all aspects of it as equally important.

1 2 3 4 5 6 7 When I have many things to do, I do whatever occurs to me first.

1 2 3 4 5 6 7 I can switch from one task to another easily, because all tasks seem to me to be equally important.

1 2 3 4 5 6 7 I like to tackle all kinds of problems, even seemingly trivial ones.

1 2 3 4 5 6 7 When discussing or writing down ideas, I use whatever comes to mind.

1 2 3 4 5 6 7 I find that solving one problem usually leads to many other ones that are just as important.

1 2 3 4 5 6 7 When trying to make a decision, I try to take all points of view into account.

(appendix continues)

Appendix C

Thinking Styles Inventory

Not at all well — Somewhat well — Extremely well

1 2 3 4 5 6 7 When there are many important things to do, I try to do as many as I can in whatever time I have.

1 2 3 4 5 6 7 When I start on a task, I like to consider all possible ways of doing it, even the most ridiculous.

1 2 3 4 5 6 7 I like situations or tasks in which I am not concerned with details.

1 2 3 4 5 6 7 I care more about the general effect than about the details of a task I have to do.

1 2 3 4 5 6 7 In doing a task, I like to see how what I do fits into the general picture.

1 2 3 4 5 6 7 I tend to emphasize the general aspect of issues or the overall effect of a project.

1 2 3 4 5 6 7 I like situations where I can focus on general issues, rather than on specifics.

1 2 3 4 5 6 7 In talking or writing down ideas, I like to show the scope and context of my ideas, that is, the general picture.

1 2 3 4 5 6 7 I tend to pay little attention to details.

1 2 3 4 5 6 7 I like working on projects that deal with general issues and not with nitty-gritty details.

1 2 3 4 5 6 7 I prefer to deal with specific problems rather than with general questions.

1 2 3 4 5 6 7 I prefer tasks dealing with a single, concrete problem, rather than general or multiple ones.

(appendix continues)

Appendix C

Thinking Styles Inventory

Not at all well — Somewhat well — Extremely well

1 2 3 4 5 6 7 I tend to break down a problem into many smaller ones that I can solve, without looking at the problem as a whole.

1 2 3 4 5 6 7 I like to collect detailed or specific information for projects I work on.

1 2 3 4 5 6 7 I like problems where I need to pay attention to detail.

1 2 3 4 5 6 7 I pay more attention to the parts of a task than to its overall effect or significance.

1 2 3 4 5 6 7 In discussing or writing on a topic, I think the details and facts are more important than the overall picture.

1 2 3 4 5 6 7 I like to memorize facts and bits of information without any particular content.

1 2 3 4 5 6 7 I like to control all phases of a project, without having to consult others.

1 2 3 4 5 6 7 When trying to make a decision, I rely on my own judgment of the situation.

1 2 3 4 5 6 7 I prefer situations where I can carry out my own ideas, without relying on others.

1 2 3 4 5 6 7 When discussing or writing down ideas, I only like to use my own ideas.

1 2 3 4 5 6 7 I like projects that I can complete independently.

1 2 3 4 5 6 7 I prefer to read reports for information I need, rather than ask others for it.

1 2 3 4 5 6 7 When faced with a problem, I like to work it out by myself.

1 2 3 4 5 6 7 I like to work alone on a task or problem.

1 2 3 4 5 6 7 When starting a task, I like to brainstorm ideas with friends or peers.

(appendix continues)

Appendix C

Thinking Styles Inventory

Not at all well — Somewhat well — Extremely well

1 2 3 4 5 6 7 If I need more information, I prefer to talk about it with others rather than to read reports on it.

1 2 3 4 5 6 7 I like to participate in activities where I can interact with others as a part of a team.

1 2 3 4 5 6 7 I like projects in which I can work together with others.

1 2 3 4 5 6 7 I like situations where I interact with others and everyone works together.

1 2 3 4 5 6 7 In a discussion or report, I like to combine my own ideas with those of others.

1 2 3 4 5 6 7 When working on a project, I like to share ideas and get input from other people.

1 2 3 4 5 6 7 When making a decision, I try to take the opinions of others into account.

1 2 3 4 5 6 7 I enjoy working on projects that allow me to try novel ways of doing things.

1 2 3 4 5 6 7 I like situations where I can try new ways of doing things.

1 2 3 4 5 6 7 I like to change routines in order to improve the way tasks are done.

1 2 3 4 5 6 7 I like to challenge old ideas or ways of doing things and to seek better ones.

1 2 3 4 5 6 7 When faced with a problem, I prefer to try new strategies or methods to solve it.

1 2 3 4 5 6 7 I like projects that allow me to look at a situation from a new perspective.

1 2 3 4 5 6 7 I like to find old problems and find new methods to solve them.

1 2 3 4 5 6 7 I like to do things in new ways not used by others in the past.

1 2 3 4 5 6 7 I like to do things in ways that have been used in the past.

(appendix continues)

Appendix C

Thinking Styles Inventory

Not at all well — Somewhat well — Extremely well

1 2 3 4 5 6 7 When I'm in charge of something, I like to follow methods and ideas used in the past.

1 2 3 4 5 6 7 I like tasks and problems that have fixed rules to follow in order to complete them.

1 2 3 4 5 6 7 I dislike problems that arise when doing something in the usual, customary way.

1 2 3 4 5 6 7 I stick to standard rules or ways of doing things.

1 2 3 4 5 6 7 I like situations where I can follow a set routine.

1 2 3 4 5 6 7 When faced with a problem, I like to solve it in a traditional way.

1 2 3 4 5 6 7 I like situations where the role I play is a traditional one.

Note. From "Thinking styles," by R. J. Sternberg, 1997, New York: Cambridge University Press.

Appendix D

Suinn-Lew Asian Self-Identity Acculturation Scale

Appendix D

Suinn-Lew Asian Self-Identity Acculturation Scale

Instructions for Cultural Self-Assessment

The questions which follow are for the purpose of collecting information about your historical background as well as more recent behaviors which may be related to your cultural identity. Circle the one answer which best describes you.

1. What language can you speak?

1= Asian only; 2= Mostly Asian, some English; 3= Asian and English about equally well (bilingual); 4= Mostly English, some Asian; 5= Only English

2. What language do you prefer?

1= Asian only; 2= Mostly Asian, some English; 3= Asian and English about equally well (bilingual); 4= Mostly English, some Asian; 5= Only English

3. How do you identify yourself?

1= Oriental; 2= Asian; 3= Asian-Canadian; 4= Taiwanese-Canadian, Chinese-Canadian, Japanese-Canadian, etc…; 5= Canadian

4. Which identification does (did) your mother use?

1= Oriental; 2= Asian; 3= Asian-Canadian; 4= Taiwanese-Canadian, Chinese-Canadian, Japanese-Canadian, etc…; 5= Canadian

5. Which identification does (did) your father use?

(appendix continues)

Appendix D

Suinn-Lew Asian Self-Identity Acculturation Scale

1= Oriental; 2= Asian; 3= Asian-Canadian; 4= Taiwanese-Canadian, Chinese-Canadian, Japanese-Canadian, etc…; 5= Canadian

6. What was the ethnic origin of the friends and peers you had, as a child up to age 6?

1= Almost exclusively Asians, Asian-Canadians, Orientals

2= Mostly Asians, Asian-Canadians, Orientals

3= About equally Asian groups and Anglo groups

4= Mostly Anglos, Blacks, Hispanics, or other non-Asian ethnic groups

5= Almost exclusively Anglos, Blacks, Hispanics, or other non-Asian ethnic groups

7. What was the ethnic origin of the friends and peers you had, as a child from 6 to 18?

1= Almost exclusively Asians, Asian-Canadians, Orientals

2= Mostly Asians, Asian-Canadians, Orientals

3= About equally Asian groups and Anglo groups

4= Mostly Anglos, Blacks, Hispanics, or other non-Asian ethnic groups

5= Almost exclusively Anglos, Blacks, Hispanics, or other non-Asian ethnic groups

8. Whom do you now associate with in the community?

1= Almost exclusively Asians, Asian-Canadians, Orientals

2= Mostly Asians, Asian-Canadians, Orientals

3= About equally Asian groups and Anglo groups

4= Mostly Anglos, Blacks, Hispanics, or other non-Asian ethnic groups

5= Almost exclusively Anglos, Blacks, Hispanics, or other non-Asian ethnic groups

(appendix continues)

Appendix D

Suinn-Lew Asian Self-Identity Acculturation Scale

9. If you could pick, whom would you prefer to associate with in the community?

1= Almost exclusively Asians, Asian-Canadians, Orientals

2= Mostly Asians, Asian-Canadians, Orientals

3= About equally Asian groups and Anglo groups

4= Mostly Anglos, Blacks, Hispanics, or other non-Asian ethnic groups

5= Almost exclusively Anglos, Blacks, Hispanics, or other non-Asian ethnic groups

10. What is your music preference?

1= Only Asian music; 2= Mostly Asian; 3= Equally Asian and English;

4= Mostly English; 5= English only

11. What is your movie preference?

1= Only Asian movies; 2= Mostly Asian; 3= Equally Asian and English;

4= Mostly English; 5= English only

12. Where were you born?

____ Canada ____ Asia ____ Other– Where _____ Don't Know

Where was your father born?

____ Canada ____ Asia ____ Other– Where _____ Don't Know

Where was your mother born?

____ Canada ____ Asia ____ Other– Where _____ Don't Know

Where was your father's father born?

____ Canada ____ Asia ____ Other– Where _____ Don't Know

(appendix continues)

Appendix D

Suinn-Lew Asian Self-Identity Acculturation Scale

Where was your father's mother born?

____ Canada ____ Asia ____ Other– Where _____ Don't Know

Where was your mother's father born?

____ Canada ____ Asia ____ Other– Where _____ Don't Know

Where was your mother's mother born?

____ Canada ____ Asia ____ Other– Where _____ Don't Know

On the basis of the above answers, circle the generation that best applies to you:

1= **1st Generation.** I was born in Asia or other.

2= **2nd Generation.** I was born in Canada, either parent was born in Asia or other.

3= **3rd Generation.** I was born in Canada, both parents were born in Canada, and all grandparents born in Asia or other.

4= **4th Generation.** I was born in Canada, both parents were born in Canada, and at least one grandparent born in Asia or other and one grandparent born in Canada.

5= **5th Generation**. I was born in Canada, both parents were born in Canada, and all grandparents also born in Canada.

6= **Don't know** what generation best fits since I lack some information.

13. Where were you raised?

1= In Asia only; 2= Mostly in Asia, some in Canada; 3= Equally in Asia and Canada; 4= Mostly in Canada, some in Asia; 5= In Canada only

(appendix continues)

Appendix D

Suinn-Lew Asian Self-Identity Acculturation Scale

14. What contact have you had with Asia?

1= Raised one year or more in Asia

2= Lived for less than one year in Asia

3= Occasional visits to Asia

4= Occasional communications (letters, phone calls, etc.) with people in Asia

5= No exposure or communications with people in Asia

15. What is your food preference at home?

1= Only Asian food; 2= Mostly Asian; 3= Equally Asian and Canadian;

4= Mostly Canadian; 5= Canadian only

16. What is your food preference in restaurants?

1= Only Asian food; 2= Mostly Asian; 3= Equally Asian and Canadian;

4= Mostly Canadian; 5= Canadian only

17. Do you read

1= Only an Asian language; 2= Asian better than English; 3= Asian and English equally well; 4= English better than Asian; 5= English only

18. Do you write

1= Only an Asian language; 2= Asian better than English; 3= Asian and English equally well; 4= English better than Asian; 5= English only

19. If you consider yourself a member of an Asian group (Oriental, Asian, Asian-Canadian, Chinese-Canadian, etc., whatever term you prefer), how much pride do you

(appendix continues)

Appendix D

Suinn-Lew Asian Self-Identity Acculturation Scale

have in this group?

1= Extremely proud; 2= Moderately; 3= Little; 4= No pride but I do not feel negative toward the group; 5= No pride but I do feel negative toward the group

20. How would you rate yourself?

1= Very Asian; 2= Mostly Asian; 3= Bicultural; 4= Mostly Westernized; 5= Very Westernized

21. Do you participate in Asian occasions, holidays, traditions, etc.?

1= Nearly all; 2= Most of them; 3= Some of them; 4= A few of them; 5= None at all

22. Rate yourself on how much you believe in Asian values (e.g., about marriage, families, education, work):

(do not believe) 1 2 3 4 5 (strongly believe in Asian values)

23. Rate your self on how much you believe in Canadian (Western) values:

(do not believe) 1 2 3 4 5 (strongly believe in Western values)

24. Rate yourself on how well you fit with other Asians of the same ethnicity:

(do not fit) 1 2 3 4 5 (fit very well)

25. Rate yourself on how well you fit with other Canadians who are non-Asian (Westerners):

(do not fit) 1 2 3 4 5 (fit very well)

26. There are many different ways in which people think of themselves. Which ONE of the following most closely describes how you view yourself?

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Appendix D

Suinn-Lew Asian Self-Identity Acculturation Scale

1= I consider myself basically an **Asian** person (e.g., Chinese, Japanese, Korean, etc...). Even though I live and work in America, I still view myself basically as an Asian person.

2= I consider myself basically as a **Canadian**. Even though I have an Asian background and characteristics, I still view myself basically as an Canadian.

3= I consider myself as an Asian-Canadian, although deep down I always know I am an **Asian.**

4= I consider myself as an Asian-Canadian, although deep down I view myself as a **Canadian first**.

5= I consider myself as an Asian-Canadian. I have both Asian and Canadian characteristics, and I view myself as a blend of **both**.

Note. From personal communication by R. M. Suinn, November 1999. Reprinted with permission.

Appendix E

Debriefing Form

Appendix E

Debriefing Form

The Purpose of the Study

This study examines the relationship between how you have adapted to the Canadian culture (acculturation) and how you think. The theory of mental self-government suggests that there are different thinking styles. It has been suggested that as an Asian individual becomes more acculturated, their thinking styles will become more like Canadian thinking styles. It is hoped that this study will examine this issue question. As a participant you were given some questions about your thinking styles and your acculturation level, these results will then be analyzed for any patterns that may exist.

You may contact Jenny Huang at 737-7526 if you have any questions or concerns about this study. Your participation is greatly appreciated!

References

Sternberg, R. J. (1997). Thinking styles. New York: Cambridge University Press.

Appendix F

Raw Data Tables

Explanation of Raw Data

Column 0:	Participant Number
Column 1-104:	Thinking Styles Inventory
Column 105-130:	Suinn-Lew Asian Self-Identity Acculturation Scale
Column 131:	Age in Years
Column 132:	Gender
Column 133:	Educational Level
Column 134:	Occupation
Column 135:	Religious Identification
Column 136:	Years in Canada/U.S.
Column 137:	Ethnic Background

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41	3	5	24	2	3	18	2	24	1
42	3	3	14	1	1	1	2	14	1

	129	130	131	132	133	134	135	136	137
43	4	1	19	2	2	1	2	2	1
44	4	5	24	2	3	19	2	17	1
45	4	1	23	1	3	19	2	9	1
46	4	5	23	2	3	6	2	17	1
47	3	3	24	2	4	1	2	24	1
48	3	5	13	2	1	1	4	7+	1
49	4	2	18	2	2	1	2	7+	1
50	1	5	20	2	2	1	2	11	1
51	4	2	18	1	2	1	2	10+	1
52	2	5	32	1	4	21	2	3	1
53	2	3	52	2	3	7	2	25	1
54	3	3	54	1	3	19	2	19	1
55	3	3	44	2	3	14	2	6	1
56	3	3	13	1	1	1	2	6	1
57	3	5	16	1	1	1	2	6	1
58	3	3	15	1	1	1	2	5	1
59	3	1	45	1	1	0	2	9	1
60	4	1	40	2	3	14	2	10	1
61	3	5	14	1	1	1	2	8	1
62	2	1	17	2	1	1	2	3	1
63	5	3	23	1	3	16	2	23	1
64	3	1	28	1	3	1	4	3	1
65	4	2	27	1	4	1	2	27	2
66	4	3	21	2	1	1	4	21	2
67	2	4	23	1	3	18	4	23	2
68	4	1	24	1	4	22	2	21	4

Appendix G

Curriculum Vita

Curriculum Vitae

Jenny Tang, M.A.

205-1333 West 7th Avenue
Vancouver, BC V6H 1B8
(604) 731-1186

jennytang@telus.net

Education and Honors

2000 - 2003 ***Student in Psy.D. Program*** (GPA 3.86)
Graduate School of Clinical Psychology, APA Accredited
George Fox University, Newberg, OR

2000 - 2001 ***Student Council Scholarship***
George Fox University, Graduate School of Clinical Psychology

1999 - 2003 ***Psi Chi National Honor Society Officer***

1998 - 2002 ***Minority Scholarship***
George Fox University, Graduate School of Clinical Psychology

1998 - 2000 ***MA in Psychology*** (GPA 3.96)
Graduate School of Clinical Psychology, APA Accredited
George Fox University, Newberg, OR

1993 - 1997 ***BA in Psychology*** (First Class, 80% or over)
University of British Columbia, Vancouver, BC

Supervised Clinical Experience

2002 – 2003 ***Internship- Geriatric Psychiatry Program***
Riverview Hospital, Port Coquitlam, BC

Duties: Cognitive screening, geriatric neuropsychological assessment, behavioral interventions, and treatment for older individuals who present with dementia, co-morbid psychiatric disorders, chronic medical problems, and a wide range of behavioral symptoms. Participate in team ward rounds.
Supervisors: Bali Sohi, Ph.D., Clinical Psychologist
Barbara Buree, Ph.D., Clinical Psychologist

Supervised Clinical Experience Continued

2002 – 2003 ***Internship- Adult Tertiary Redevelopment Program***
Riverview Hospital, Port Coquitlam, BC

Duties: Structured diagnostic interviews, intellectual and personality assessments, neuropsychological screening, and individual therapy in the admitting unit. Multidisciplinary consultation and supervision of students.
Supervisor: Glenn Haley, Ph.D., Clinical Psychologist

2002 – 2003 ***Internship- Outpatient Rotation***
Langley Mental Health Center, Langley, BC

Duties: Initial screening, assessment, triage, crisis intervention, and short term treatment for adults with acute symptoms and functional impairment. Work with ASTAT (Adult Short Term Assessment and Treatment) team and liaise with other community agencies as appropriate. Co-facilitate group treatment.
Supervisor: Patricia Hyatt, Ph.D., Clinical Psychologist

2001 - 2002 ***Pre-Internship***
George Fox University, Newberg, OR

Duties: Provided weekly individual supervision to second year doctoral students and received ongoing supervision in regard to supervisory work.
Supervisor: Nancy Thurston, Psy.D., Clinical Psychologist

2001 - 2002 ***Pre-Internship***
Oregon State Hospital, Salem, OR

Duties: Cognitive, neuropsychological and personality assessment on a medium security inpatient forensic unit. Patient population includes severe behavioral and psychiatric problems. Generated reports and consultation with ward staff. Also part of interdisciplinary team treatment planning.
Supervisor: Claudia Kritz, Ph.D., Clinical Psychologist

2000 - 2001 ***Practicum II***
Yamhill County Family and Youth Programs, McMinnville, OR

Duties: Long term individual play therapy with children and brief problem-focused individual therapy with adolescents in community mental health. Facilitation of an adolescent chemical dependency process group, an adolescent sexually abused girls group, a social skills development group, and a high school anger management group. Family and filial therapy, case management and consultation.
Supervisors: Dawn Hoffman-Grey, Psy.D., Clinical Psychologist,
Diane Roelandt, LCSW, and Sherry Sullens, CADCI.

Supervised Clinical Experience Continued

1999 - 2000 ***Practicum I***
William Temple House, Portland, OR

Duties: Individual therapy with low income adult population in community mental health. Clients presented with a broad range of problems, but particular emphasis on anxiety and affective disorders. Conduct clinical interviews, offer treatment planning, and present client cases. Also co-facilitation of psychoeducational relationship skills class for couples.
Supervisors: Susan Bettis, Ph.D., Clinical Psychologist
Eric Johnson, Ph.D., Clinical Psychologist

1998 - 1999 ***Pre-Practicum***
GFU Health and Counseling Center, Newberg, OR

Duties: Individual therapy, interview assessments, and personality testing with college student population. Reading and research in preparation for sessions, diagnosis and treatment planning, client case presentations, and report writing.
Supervisors: Carol Dell'Oliver, Ph.D., Clinical Psychologist,
Lonny Harner, MA

Research Experience

1999 - 2003 ***Doctoral Dissertation,*** Acculturation and Thinking Styles in Asian-Canadians
George Fox University, Newberg, OR

Duties: Develop original research project, collect and analyze data. This study reviews the theory of mental self-government which postulates various thinking styles (Sternberg, 1988) and examines its relationship to acculturation in Asian-Canadians. Demonstrated the reliability and validity of the Thinking Styles Inventory in this sample.
Chair: Leonardo Marmol, Ph.D., ABPP, Clinical Psychologist

1997 - 1998 ***Research Assistant,*** Cross-Cultural Laboratory
University of British Columbia, Vancouver, BC

Duties: Designed an experiment, conducted research, developed a coding system, and analyzed data on how Asian students cope with conflict differently from their European-Canadian counterparts.
Supervisors: Dirren Lehman, Ph.D., Research Psychologist,
Roger Tweed, MA

Research Experience Continued

1997 - 1998 ***Research Assistant***, Stereotype and Prejudice Laboratory
University of British Columbia, Vancouver, BC

Duties: Conducted research on how one's personal need for structure affects stereotype formation. Duties included data entry and analysis on SPSS, test administration, and test scoring.
Supervisors: Mark Schaller, Ph.D., Research Psychologist,
Luke Conway, MA

1997 - 1998 ***Research Assistant,*** Violence in Intimate Relationships Laboratory
University of British Columbia, Vancouver, BC

Duties: Literature searches, APA referencing, filing grant proposals, testing, and test scoring in the study of abusive relationships.
Supervisor: Donald Dutton, Ph.D., Research Psychologist

1997 - 1998 ***Research Assistant,*** Forensic Laboratory
University of British Columbia, Vancouver, BC

Duties: Interview subjects in an attempt to create moderately negative false childhood memories in order to detail the differences between false/true recollections and fabricated lies.
Supervisor: Steve Porter, MA

Relevant Work Experience

2001 - 2002 ***Graduate Assistant***
Wayne Adams, Ph.D., George Fox University, Newberg, OR

Duties: Editor of bi-monthly departmental newsletter, alumni newsletter, and organization of community events for the psychology department.

2000 - 2001 ***Graduate Assistant***
Robert Buckler, M.D., George Fox University, Newberg, OR

Duties: Literature searches and development of articles for publication that examined social supports among men who batter.

1999 - 2000 ***Graduate Assistant***
Nancy Thurston, Psy.D., George Fox University, Newberg, OR

Duties: Guest lecturer on *Anxiety Disorders* for graduate course, preparing class materials, and grading assignments.

Professional Presentations

Tang, J. (2003, May). *Acculturation and the Theory of Mental Self-Government in a Chinese-Canadian Sample.* Poster session presented at the annual meeting of the Western Psychological Association, Vancouver, BC.

*Huang, J. (2001, September). *The Asian-American Psychological Association: A Report.* Paper presented at George Fox University, Newberg, OR.

Huang, J. (2001, August). *Asian-American Issues in Psychotherapy: A Case Illustration.* Poster session presented at the annual meeting of the American Psychological Association, Division 29, San Francisco, CA.

Huang, J., & Yee, A. (2001, August). *Preliminary Chinese Translation of the Spiritual Well-Being Scale.* Poster session presented at the annual meeting of the American Psychological Association, Division 36, San Francisco, CA.

Huang, J. (2001, May). *Group Therapy with Child Victims of Sexual Abuse.* Poster session presented at the annual meeting of the Western Psychological Association, Maui, HI.

Huang, J. (2000, April). *Prejudice and Stereotypes at Columbine.* Poster session presented at the annual meeting of the Western Psychological Association, Portland, OR.

Huang, J. (2000, April). *The Chinese Cultural Context.* Poster session presented at the annual meeting of the Western Psychological Association, Portland, OR.

Huang, J. (2000, June). *Looking at the Bible and Psychotherapy from a Chinese Perspective.* Poster session presented at the annual meeting of the Christian Association for Psychological Studies, Western Region, Scotts Valley, CA.

*(Huang is my maiden name.)

Memberships and Professional Affiliations

1999 - present ***Graduate Student Affiliate***
Asian American Psychological Association

1998 - present ***Graduate Student Affiliate***
American Psychological Association

2001 - 2002 ***Peer selected Student Council President***
George Fox University, Graduate School of Clinical Psychology

1998 - 2001 ***Peer selected Student Council Representative***
George Fox University, Graduate School of Clinical Psychology

Selected Professional Seminars

Apr. 2, 2003 ***Mood and Anxiety Disorders Conference***
Riverview Hospital

Mar. 28, 2003 ***Motivational Interviewing Workshop***
Pohsuan Zaide, M.A., Riverview Hospital

Feb. 10, 2003 ***Effects of Medication on the Elderly***
R. Malyuk, Pharm.D., Riverview Hospital

Mar. 10, 2003 ***Depression and Dementia***
Barbara Buree, Ph.D., Riverview Hospital

Jan. 20, 2003 ***Sexual Abuse***
Bali Sohi, Ph.D., Riverview Hospital

Dec. 9, 2002 ***Antipsychotic Medications***
A. DeWan, M.D., Riverview Hospital

Nov. 18, 2002 ***Treatment for Persons with Brain Impairment***
Grant Iverson, Ph.D., Riverview Hospital

Oct. 28, 2002 ***Dementia***
Ivan Torres, Ph.D., Riverview Hospital

Sept. 14, 2001 ***Prevention and Management of Aggressive Behavior***
Oregon State Hospital

Aug. 23, 2001 ***Asian-American Psychological Association-Selected Seminars***
University of San Francisco

October 2000 ***Introductory Workshop in Clinical Hypnosis***
Susan Rustvold, DMD, MS, Portland Academy of Hypnosis

Feb. 7, 2000 ***Grieving Children***
Donna Schuurman, Ph.D., William Temple House

Jan. 31, 2000 ***Addicted Adolescents***
Connie Peterson, Ph.D., William Temple House

Jan. 20, 2000 ***Psychotherapy with African-American Clients***
Kumea Shorter-Gooden, Ph.D., George Fox University

Nov. 29, 1999 ***Taking a Sexual History***
Eleanor Hamilton, Ph.D., William Temple House

Selected Professional Seminars Continued

Nov. 8, 1999 ***Drug and Alcohol Influences on the Family***
Nan Whitaker-Emrich, MEd, LMFT, William Temple House

Oct. 27, 1999 ***Geriatric Issues***
Cliff Singer, MD, George Fox University

Sept. 27, 1999 ***Suicide Assessment***
Kathy Horey, MS, William Temple House

Apr. 16, 1999 ***Family Systems***
David Freeman, DSW, William Temple House

Mar. 31, 1999 ***Naturopathic Medicine***
Donna Guthrie, ND, George Fox University

Mar. 10, 1999 ***WRAML***
Wayne Adams, Ph.D., ABPP, George Fox University

Feb. 27, 1999 ***Repressed Memories***
Elizabeth Loftus, Ph.D., ABPP, George Fox University

Oct. 3, 1998 ***16PF***
Michael Karson, Ph.D., ABPP, George Fox University

Assessment Experience Log

Assessment Instrument	*# Administered & Scored*	*# Reports Written*
Aphasia Screening Exam	1	1
Beck Anxiety Inventory (BAI)	1	1
Beck Depression Inventory (BDI)	9	5
Bender Gestalt	1	1
Boston Naming Test	1	1
California Verbal Learning Test, 2nd Ed.	1	1
Children's Behavior Checklist (CBCL)	1	1
COGNISTAT	46	46
Cohen-Mansfield Agitation Inventory (CMAI)	1	1
Controlled Oral Word Association Test	1	1
Dementia Rating Scale (DRS)	1	1
Finger Tapping Test	1	1

Assessment Experience Log

Assessment Instrument	*# Administered & Scored*	*# Reports Written*
Geriatric Depression Scale (GDS)	1	1
Halstead-Reitan Neuropsychology Battery	1	1
Hooper Visual Organization Test	1	1
House-Tree-Person Drawings	10	7
Millon Clinical Multi-Axial Inventory	4	3
Mini Mental Status Exam (MMSE)	3	3
MMPI-II	7	8
MMPI-A	1	1
Modified Mini Mental Scale (3MS)	3	3
Myers-Briggs Type Indicator	1	0
Neuropsychiatric Inventory (NPI)	1	1
Positive and Negative Syndrome Scale	3	3
Personality Assessment Inventory	26	25
Purdue Pegboard	2	2
Reitan-Indiana Aphasia Screening Test	1	1
RBANS	21	21
Rey 15-item Test	1	1
Rey Osterrieth Complex Figure Test	13	13
Rorschach (Exner System)	5	7
Rotter Incomplete Sentences Blank	1	3
Structured Clinical Interview for DSM-IV	4	4
Stroop Color-Word Test	2	2
Thematic Apperception Test	1	1
Trial-Making Test	22	22
Vineland Adaptive Behaviors Scales	1	1
WAIS-III	39	39
Weschler Abbreviated Scale of Intelligence	35	35
Weschler Individual Achievement Test-II	1	1
Weschler Memory Scale III	2	2
Wide Range Achievement Test III	47	47
WISC-III	1	2
Wisconsin Card Sorting Test	5	5
WRAML	1	1
16 Personality Factors	3	2
21-item Test	2	2