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The Roles of Cultural Competence and Cultural Motivation in Cultural Framing

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THE ROLES OF CULTURAL COMPETENCE AND CULTURAL MOTIVATION IN

CULTURAL FRAMING

by
Natalia Koustova

A Thesis
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ABSTRACT

Previous research suggests that bicultural individuals vary in whether they shift

cultural interpretive frames when cued by the environment. The current study explored

the roles of cultural competence and cultural motivation in the variations in response to

cultural framing cues. Sixty-five bicultural Canadians of East or South Asian descent

completed measures of cultural competence and motivation for both heritage (East or

South Asian) and host (Canadian) cultures. Participants were primed with either heritage

or host cultural cues using a word-search puzzle. Culturally congruent frames were

assessed via participants' responses on a measure of individualism-collectivism at the

self-construal level. Study findings suggest that individuals who scored high on measures

of competence and motivation in the cued culture showed higher cultural congruence

than those who scored low on competence and motivation. The findings are discussed in

terms of the implications of differentiating competence and motivation in the

acculturation and cultural framing literatures.

ACKNOWLEDGEMENTS

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CHAPTER I

Introduction

Canada is a country that prides itself on its multiculturalism. On an annual basis it opens its borders to about 250,000 new immigrants (Becklumb, 2008), approximately 75% of whom are so-called "visible minorities" (Statistics Canada, 2008). In 2006, South Asians became the largest visible minority group, hailing largely from India, Pakistan, Sri Lanka, and Bangladesh. The second largest visible minority group are the Chinese, followed by Black, Latino, Lebanese, Iranian, and Vietnamese (Statistics Canada, 2008). Approximately 95% of visible minorities who immigrate to Canada move to large metropolitan areas (Statistics Canada, 2008). It is projected that by 2030 more than 60% of Toronto's population will be made up of visible minorities (Hansen, 2010). Similar numbers are projected for other large Canadian metropolitan centers such as Vancouver and Montreal (Hansen, 2010). These new Canadians are confronted with the reality of becoming bicultural – adjusting to contrasting values, attitudes and behaviours associated with both their heritage culture and the Canadian mainstream or host culture.

Research evidence suggests that bicultural individuals' culturally-related attitudes and behaviours are cued to a certain extent by the environment. When the environment presents cues for the individual's heritage culture, bicultural individuals unconsciously express attitudes and behaviours congruent with that culture. When in an environment characterized by host culture cues, bicultural individuals unconsciously express attitudes and behaviours congruent with the host culture. Some bicultural people respond more completely to these cultural framing cues than do others. The current study explores the

possibility that the observed variations in responses to cultural framing cues may be influenced by two factors: competence in the relevant culture and motivation to adopt the attitudes and enact the behaviours associated with the relevant culture.

Cultural Framing

In 1974, Erving Goffman proposed the concept of cognitive frames. In an effort to explain how we understand and organize our experiences, he defined frames as "principles of organization, which govern the subjective meanings we assign to social events" (Goffman, 1974, p. 11). Closely related to the theory of cognitive schemas, cognitive frames allow us to focus on relevant aspects of the environment and interpret it in ways congruent with that frame. Goffman's theory also stressed that individuals can be in more than one frame at any particular time. Although frames help us organize environmental stimuli, they are not mutually exclusive (Diehl & McFarland, 2010). This interesting idea would suggest that individuals are constantly immersed in multiple frames and, depending on environmental cues, will adjust their behaviour accordingly.

In the field of psychology, research has shown that individuals alter their behaviour unconsciously in response to situational primes or cues that trigger particular cognitive frames. Within a sociocultural context, for example, implicit association tests demonstrate that gender and ethnocultural group membership recognition can trigger unconscious responses that may not be consistent with our conscious attitudes and values (Greenwald & Banaji, 1995; Greenwald, McGhee, & Schwartz, 1998; Rudman, Greenwald, & McGhee, 2001). Steele and his colleagues have demonstrated that a cognitive prime as simple as a request for information on gender or race can lead the targets of these primes to demonstrate stereotype congruent behaviours (Spencer, Steele,

& Quinn, 1999; Steele, 1997; Steele & Aronson, 1995).

Some cultural researchers and theorists have borrowed the concept of cognitive frames and applied it to the responses of individuals functioning within more than one cultural context. What emerged from this approach is the idea of cultural frame switching. *Cultural frame switching* is defined as "the individual shift[ing] between interpretive frames rooted in different cultures in response to cues in the social environment" (Hong, Morris, Chiu, & Benet-Martínez, 2000, p.709). As with other kinds of cognitive priming, the evidence suggests that participants primed with culturally specific cues will unconsciously adjust their attitudes and behaviours to match the cultural cues. The idea of cultural frame switching is part of the dynamic constructivist approach to cultural cognition, which suggests that how one responds to the environment may change depending on the context (Hong & Mallorie, 2004). According to this approach, cultural knowledge is not organized into a single structure but is a loose network of domain specific, interrelated concepts (Hong & Mallorie, 2004; Pouliasi & Verkuyten, 2006). When individuals gain experiences with more than one culture, they develop stronger or looser interrelationships between concepts within certain contexts (Pouliasi & Verkuyten, 2006). In other words, they build culturally specific frames of reference that make relationships between some concepts more accessible in one cultural context and other concepts more accessible in another cultural context. The salience of a particular culture in a particular context makes theories and beliefs associated with that culture more accessible than the other theories or beliefs that the individual simultaneously holds (Hong & Mallorie, 2004).

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It should be noted that the phrase "frame switching" is somewhat of a misnomer because it implies that bicultural individuals' culturally influenced attitudes and behaviours are dichotomous rather than existing on a continuum. The terminology creates the impression that the cognitive prime serves to substitute one set of attitudes for another. There are two specific issues related to this interpretation.

First, researchers are still by and large unclear whether the cultural meaning networks are discrete or integrated, although studies on bilingualism show more evidence for shared networks (Francis, 1999). It seems most likely that there is at least partial integration, so that individuals shift on an attitudinal continuum rather than "switching" from one discrete network to another.

Second, studies in cultural frame switching are generally between-subject rather than within-subject and do not measure the participant's "frame" prior to their exposure to the prime. Therefore, claims that participants have "switched" cannot readily be made. Though the term "frame switching" has not been abandoned or replaced by another term, Hong and his colleagues (2000), whose article pioneered the term, have used less dichotomous language (by just referring to dynamic constructivist approach) in subsequent papers (e.g., Hong, & Mallorie, 2004). Other researchers (e.g., Benet-Martínez, Leu, Lee, & Morris, 2002; Pouliasi & Verkuyten, 2006; Ross, Xun, & Wilson, 2002; Verkuyten & Pouliasi, 2006) have followed suit. Verkuyten and Pouliasi (2006) refer to cultural framing as opposed to cultural frame switching to describe the process of culture guiding cognition. The present study will also use the same terminology.

Cultural framing research provides some strong evidence that how an individual responds to an environment is in part dependent on the availability of cultural cues in the

situation (Hong & Mallorie, 2004). Ramirez-Esparza, Gosling, Benet-Martínez, Potter, and Pennebaker (2006) compared personality profiles of American and Mexican participants and found that Americans tended to rate higher on extraversion, agreeableness, conscientiousness, and openness. Mexicans tended to rate higher on neuroticism than Americans. They then primed fluently bilingual Mexican-Americans by administering questionnaires in either English or Spanish. They wanted to see if this would produce differences on the Big Five personality inventory. Their results suggest that those participants who answered in English rated higher on measures of extraversion, agreeableness, and conscientiousness (in other words, more typically American). Those who answered the same questionnaires in Spanish rated lower on these traits (or more typically Mexican).

Pouliasi and Verkuyten (2006) used structural equation modeling to explore whether priming with Greek or Dutch cultural cues would activate different conceptual networks. Their sample included monocultural Greeks in Athens, monocultural Dutch living in Amsterdam, and a bicultural sample of Greeks living in the Netherlands. The researchers used the two monocultural samples to obtain a baseline profile of the conceptual networks on the factors of work, friendship, and the self for each culture. The bicultural participants were then shown either Greek or Dutch cultural icons (e.g., the national flag, culture-specific clothing) and then completed the questionnaire in either Greek or Dutch. Their results suggest that Greek bicultural participants primed with Greek icons and language used a network of related concepts that matched that of monocultural Greeks. Participants who were primed with Dutch icons and language used a network much more similar to that of monocultural Dutch on two of the three factors on

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which they were compared (with the exception of friendship).

Priming Independence and Interdependence

Much of the cultural framing research relies on cultural differences related to relative cultural individualism or collectivism. Individualism-collectivism is a group-level dimension on which cultures vastly differ, and seems to be stable over time. An individual who is bicultural may be from one culture that is highly collectivist and living in another culture that is highly individualist. Cultural framing can be measured by seeing if individualism or collectivism becomes more dominant depending on the availability of cultural cues.

In his classic work, Hofstede (1997) mapped respondents in more than 50 different countries on their position on four continua: power-distance, masculinity-femininity, uncertainty avoidance, and individualism-collectivism. Since then, the individualism-collectivism dimension in particular has inspired a large body of research on the variation of members of cultures on this trait. Individualism is the focus on personal goals, detachment from others' personal lives, and individual concern for self and immediate family. Collectivism is defined as attitudes and behaviours that show consideration of how one's decisions and actions affect other people. Collectivism emphasizes sharing of material and nonmaterial resources and outcomes, susceptibility to social influences, concern with self-presentation, and feeling of involvement in others' lives (Hui & Triandis, 1986; Hui & Yee, 1994). Evidence suggests that North American cultures tend to be the most individualistic and least collectivist, and Asian cultures tend to be more collectivist and less individualistic (with some notable exceptions, such as Japan; Hofstede 1997; Markus & Kitayama, 1991; Oyserman et al., 2002; Triandis, McCusker &

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Hui, 1990).

　　Although the relative individualism or collectivism of particular cultures or countries is obviously reflected in the behaviours of their members, individuals within these cultures or countries do vary in their positions on the individualist-collectivist continuum. Triandis, Leung, Villareal and Clack (1985) used the terms idiocentrism and allocentrism to describe the psychological dimension that corresponds at the individual level to the cultural level of individualism-collectivism. However, although the concepts have been separated in terminology there is still much confusion in practice and the group level of analysis has been applied to the individuals in many studies (Oyserman et al., 2002; Voronov & Singer, 2002).

　　Markus and Kitayama (1991) define individualism-collectivism at the individual level of analysis in terms of self-construals, or the individual's "repertoire of thoughts, feelings and actions" (p. 226). An interdependent self-construal focuses on connectedness with others. The interdependent self is less distinct from others, relational, focused on interpersonal relationships with others from the same ingroup, and corresponds to the group level concept of collectivism. An independent self-construal emphasizes uniqueness of the self, drive toward self-actualization and autonomy, and corresponds to the group level value of individualism. It is important to note that these two dimensions are defined as orthogonal (Singelis, 1994); individuals may be both highly interdependent and highly independent.

　　Previous cultural framing research has assessed interdependence/independence as an outcome measure after priming participants. In their pioneering cultural framing study, Hong et al. (2000) showed that bicultural individuals' relative interdependent or

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independent attributions were influenced by cultural cues. Hong et al. (2000) used a

sample of bicultural Westernized Chinese participants. These participants lived in Hong

Kong, spoke English, received university level instruction in English, and watched

American television.   These bicultural participants were presented with pictures of either

Chinese cultural icons (e.g., Chinese dragon, stone monkey, famous Chinese people and

landmarks) or American cultural icons (e.g., American flag, Superman). Participants

were then shown a picture of a group of fish with one fish ahead of the others and asked

to interpret it. Participants primed with Chinese icons tended to express more

interdependent attributions in response to the task, describing the lone fish as part of the

group. Participants exposed to American icons tended to express more independent

attributions, such as describing the fish as leading the group.

Cheng, Lee and Benet-Martínez (2006) replicated the same interpretive task but

focused on positive and negative primes. Luna et al. (2008) primed participants with

language and looked at whether there was a difference in self-sufficiency versus

dependence on others, which was their proxy measure for interdependence/independence.

Many other studies have replicated these findings using a variety of primes and different

measures of interdependence/independence (e.g., Benet-Martínez et al., 2002; Lechuga,

2008; Ross et al., 2000). There is strong evidence that participants from collectivist

cultures who are primed with heritage culture primes will score significantly higher on a

measure of interdependence than participants from collectivist cultures primed with host

culture primes.

Cultural Congruence and Cultural Framing

Laboratory research on cultural framing primarily focuses on the unconscious triggering of culturally congruent responses in a highly controlled environment in participants chosen because of their facility in both heritage and host cultures. In the real world, however, it is very likely that bicultural individuals vary in their competence in one or both cultures. It is also likely that bicultural individuals vary in their motivation to adopt heritage or host culture attitudes and behaviours. The proposed study seeks to explore the extent to which cultural competence and cultural motivation influence the responsiveness of bicultural individuals to culture-specific cues.

Cultural Competence

Individuals' successful functioning in society is facilitated by their demonstration of cultural competence. LaFromboise, Coleman, and Gerton (1993) define cultural competence in terms of seven components: 1. Possession of strong personal identity. 2. Knowledge and use of cultural beliefs and values. 3. Display of sensitivity to the affective processes of the culture. 4. Knowledge of the language and ability to communicate. 5. Performance of behaviours that are socially required. 6. Interaction with social groups within the culture. 7. Ability to engage with institutional structures of the culture. This is a useful conceptual framework because it comprehensively enumerates the different kinds of skills that individuals need to develop in order to be able to function smoothly within a cultural context.

All of the components in LaFromboise et al.'s (1993) definition of cultural competence except strong personal identity focus on knowledge that is relevant to a particular culture and the ability to use that knowledge. Culture gets transmitted across

generations through a process called enculturation, whereby children learn their own culture through imitation and institutional interactions (e.g., Bonner, 1953; Rudmin, 2009). Research indicates that individuals within a single culture can differ in their level of enculturation because of family and peer influence, personality characteristics (Braza, Braza, Carreras, & Muñoz, 1994), and language ability (Thorpe, 1955) among other factors. Therefore, enculturation may be considered as a complex and lifelong process even for monocultural individuals (Rudmin, 2009).

Bicultural individuals are faced with the greater challenge of developing competence in two cultures. On the basis of their work with members of various Native American groups, LaFromboise and Rowe (1983) argued that members of minority groups might be more motivated to preserve their own traditions than to adopt the dominant culture's values. However, despite their lack of motivation, they must still gain cultural competence, or the skills to successfully navigate mainstream North American culture. In their theoretical paper LaFromboise and Rowe (1983) recommended a skills training program, as opposed to assimilation or therapy, to increase adaptation success.

Other more evidence-based studies have explored the impact of cultural competence on individual wellbeing. David, Okazaki, and Saw (2009) designed a bicultural efficacy questionnaire using LaFromboise et al.'s (1993) framework. This measure focused on social interaction skills, communication ability, cultural knowledge, and role repertoire in both host and heritage cultures. Using an Asian-American sample, David et al. found that a high bicultural self-efficacy score correlated with increased life satisfaction, decreased anxiety, and decreased depression. Diemer (2007) reported that African-American men who are successful in a university setting have learned to

demonstrate behaviours appropriate to university culture in order to take advantage of the

opportunity structure. Alfred (2001) interviewed tenured African-American faculty

women in academia. The respondents in this qualitative study emphasized that in order

to succeed in the predominantly White academic culture, they had to know how the

culture works and be able to meet its expectations and interact with institutional

members. Similar findings have been reported with Hispanic samples. In a qualitative

interview study Gandara (1982) suggested that Mexican-American women who were

successful in United States universities were well versed in interacting with the

mainstream culture, even if they mostly chose to participate in their heritage culture in

their personal lives. These findings suggest that a certain baseline cultural competence is

necessary in order to effectively produce appropriate cultural behaviours. Individuals

require a set of skills in order to shift frames and respond to cultural cues.

<div align="center">Cultural Motivation</div>

Researchers in the area of cognitive priming who focus on implicit associations

and stereotype salience have demonstrated that motivation can affect whether the priming

works as expected. Even though responses to cognitive primes are automatic or

unconscious, individuals who are motivated to change their responses can actually

change them. Pronin, Steele, and Ross (2004) reported that individuals could learn how

to combat automatic gender or ethnic frames by employing conscious cognitive

mechanisms. Attributional retraining studies show that it is possible to retrain women

who have internalized the stereotype that women are bad at math to attribute failure to

external factors such as lack of practice. Externalizing failure instead of identifying with

it motivates these women to significantly improve on subsequent math performance (Heller & Ziegler, 1996).

There is some evidence that responses to cultural primes can also be affected by motivational factors. A study by Luna, Ringberg, and Peracchio (2008) involving Spanish-English participants demonstrated that in some circumstances, cultural framing depends on cultural motivation rather than cultural competence. All their Hispanic-American participants were fluent in Spanish as well as English. However, Hispanic Americans who were both bilingual and bicultural (highly identified with their heritage and host cultures) responded more strongly to the Hispanic culture prime than those who were competent in the language but did not identify with their heritage culture. To assess the differences between the bicultural Hispanics and the "just bilingual" Hispanics, Luna et al. used a self-sufficiency/other-dependence measure (as an individual-level assessment of cultural individualism-collectivism) as the outcome measure. Their results showed that bicultural participants, when primed with Spanish, were significantly more other-dependent than the just bilingual participants primed with Spanish.

Motivation is central to theory and research on acculturation. Acculturation is viewed as a dynamic process that involves individuals exerting considerable amounts of control on how they use their new cultural knowledge (Lechuga, 2008). Acculturation theory suggests that the strategies chosen by bicultural individuals are determined by the relative strength of their motivations to maintain their heritage culture and participate in the host culture. Berry (1997) defines his acculturation framework in terms of "*cultural maintenance* (the extent to which people value and wish to maintain their cultural identity and behaviours); and *contact participation* (the extent to which people value and seek out

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contact with those outside their own group, and wish to participate in the daily life of the larger society)" (p. 13). Berry and his colleagues (e.g., Berry & Annis, 1974; Berry, Poortinga, Segall, & Dasen, 2002) discuss these two continuous dimensions in terms of four distinct strategies. Individuals who reject heritage cultural values and embrace host culture values are using an assimilation strategy. The separation strategy involves the maintenance of heritage cultural values and the rejection of host culture values. Those who choose integration value and maintain both heritage culture and host culture values and choose to participate in both cultures. Finally, marginalization involves the rejection of (or disidentification with) both heritage and host cultural values. The work of Berry and his colleagues is important in that it highlights the fact that bicultural individuals vary in their motivation to maintain heritage cultural competence and to gain host cultural competence based on their identification with the culture in question.

Other researchers have identified somewhat different acculturation continuum strategies. Schwartz and Zamboanga (2008) identified six acculturation categories in their sample of first- and second-generation Hispanic students living in the United States. These included three types of bicultural or integrated participants with varying degrees of competence and motivation. Full biculturals were characterized by high levels of identification with both heritage and host cultures and high levels of socialization in the heritage culture. Partial biculturals experienced a lot of pressure against assimilation into the host culture and did not rate as high on integration strategy as full biculturals. American-oriented biculturals rated lower on ethnic identification and higher on individualism and assimilation than the other two bicultural groups. The three bicultural groups seemed to differ primarily in terms of motivational factors. The marginalized

group was not found in the Schwartz and Zamboanga sample, which was consistent with many other studies; however the researchers did find a small group of participants who were confused about their cultural identity. The last two groups identified in the study included those who were fully assimilated, and the separated group, which represented students who were motivated to identify only as Hispanic, but were nonetheless highly competent in the mainstream culture as well.

Cultural motivation has also been addressed in theory and research on ethnic identity. Ethnic identity involves gaining a sense of belonging and a secure sense of self as a member of a group (Phinney, 1992), which is a motivating factor for both heritage cultural maintenance and host contact participation. In fact, Rudmin (2009) proposes a modified model of acculturation in which motivational variables are explicitly included as separate from learning competence. According to his model, motivations can include cultural attitudes, ethnic identity, reacting to positive and negative stress, and/or assessing the utility of gaining competence (Rudmin, 2009).

In one of the few studies to include cultural identification as a motivating factor, Zou, Morris, and Benet-Martínez (2008) looked at whether the culture-congruent responses to heritage or host culture primes of bicultural Chinese-American participants were affected by whether they identified or disidentified with the relevant culture. As hypothesized, participants who identified with the culture of their primed condition responded in culture congruent ways on an individualism-collectivism attribution task. Participants who disidentified with the culture provided incongruent responses to the task.

All these similar concepts are circling around the same idea – that one's attitude

regarding participating in a culture affects how one reacts to the cultural context. Defining cultural motivation as the attitude toward culture participation, or identification with that culture, it is suggested in the present study that cultural motivation plays an important role in producing congruent responses to culturally-specific cues.

Recognition of the possible role of cultural motivation paints a more complex landscape for cultural framing theory, allowing for different explanations for varying responses to cultural primes. Boski (2008) argues that the concept of cultural framing has been predicated on the assumption that the individuals who respond most appropriately to either heritage or host culture cues have chosen the integration strategy of acculturation. The underlying assumption appears to be that all framing study participants have equivalent levels of competence and motivation to demonstrate culturally appropriate behaviours in both cultures. Because of this unrecognized assumption, cultural framing studies tend not to assess participants' bicultural competence or motivation. At best, participants are selected if they are fluent in both languages, with language fluency used as a proxy measure for cultural competence and ethnic identity as a proxy for motivation. In addition, none of the studies reviewed have looked at whether competence and motivation have an interactive effect on increased cultural congruence.

Hypothesis

The present study explored the extent to which bicultural individuals' response to a culture-specific cognitive prime is based on their competence in that culture and their motivation to adopt culturally congruent attitudes and behaviours. Based on a review of the literature, the specific hypothesis is as follows:

H: In response to a culture-specific cognitive prime, individuals with high levels of competence and motivation with reference to the culture being primed will score significantly higher on a culturally congruent measure of interdependence/independence than individuals with low levels of competence and motivation.

CHAPTER II

Method

Participants

Sixty-eight South Asian- and East Asian-Canadian undergraduate students enrolled at the University of Windsor completed study measures. Two of these students completed the questionnaires out of order, so their data were not included. One participant in the host priming condition was eliminated from subsequent analyses because her score on the dependent measure (Independence Scale) was lower than that of any other participant (z-score = -2.54). Because this score was so vastly different from the rest of the data, it is likely an indicator that there may have been an error in completing the questionnaire.

Thus, the final study sample was comprised of 65 South Asian- and East Asian-Canadian undergraduate students (11 male, 54 female), 57 of whom were recruited through the Psychology Participant Pool, and eight of whom were recruited through posters on campus. The age range of participants was between 18 and 44 with a mean age of 23.1, $SD = 5.69$. The sample included 47 first-generation and 18 second-generation immigrants. The first-generation participants were born in Bangladesh, China, Hong Kong, India, Pakistan, Philippines, South Korea, and Sri Lanka. All first-generation participants had resided in Canada for at least three years. They varied in age from 18 to 44 ($M = 23.67$, $SD = 6.33$). Their age of arrival to Canada varied from 2.5 to 37 years ($M = 13.07$, $SD = 7.85$). The age range for second-generation participants was from 18 to 28 ($M = 21.67$, $SD = 3.13$). Second-generation participants reported having

parents who were first generation immigrants from Bangladesh, Hong Kong, Pakistan, India, Malaysia, Philippines, South Korea, Sri Lanka, and Vietnam.

Procedure

This study used a 2 (heritage or host culture prime) x 2 (high or low cultural competence) x 2 (high or low cultural motivation) between-subjects factorial design (Appendix A).

Participants recruited through the Participant Pool were given class credit for participation. Participants recruited through advertisements were entered into a draw for a $50 gift card to the campus bookstore.

Participants were invited to come to a room on campus to participate in a study of bicultural individuals' cognitive processes. After reading and signing the informed consent form, all participants completed a measure of cultural competence (Appendix B), assessing their knowledge of and familiarity with behaviours associated with heritage and host cultures. Participants also completed a measure of cultural motivation (Appendix B), assessing their identification with heritage and host cultures.

Participants then completed an unrelated filler task. The filler task consisted of a ten-minute paper and pencil spatial ability test, which required participants to match rotated shapes (Appendix C). This task was included to minimize the influence of the initial cultural competence and motivation measures on the subsequent cultural prime. According to priming literature, the effect of priming disappears if there is a time delay of 60 seconds or more between the administration of the priming stimulus and the subsequent measure (Cramer, 1969). If the cultural competence and cultural motivation scales had any priming effect of their own, this should dissipate if the participants are

involved in an unrelated task. A spatial ability test was chosen because it is engaging enough to distract the participants; yet does not explicitly utilize language or culture.

Participants were then randomly assigned to a Heritage Culture or Host Culture priming condition. Half the participants completed a heritage culture priming task, and half the participants completed a host culture priming task. This priming task consisted of a word search puzzle, which contained either ten heritage or ten host culture priming words (Appendix D). After the cultural prime, all participants completed the dependent measure: two scales measuring their relative interdependence and independence (Appendix E). A short demographic questionnaire followed that asked the participants' country of origin, age when they moved to Canada, current age, and gender (Appendix F).

Priming Task

The heritage and host culture primes used in this study were based on the methodology used by Cheng et al. (2006; Appendix D). Cheng et al. presented Asian-American participants with a list of seven positive and seven negative Asian- or American-stereotypic words that the researchers generated from reviewing studies on Asian and American stereotypes. They found that participants responded in prime congruent ways when the words (positive or negative) matched how they felt about the culture being primed.

In order to generate cultural primes that were valid in the Canadian context, 36 students enrolled in a fourth year psychology course on stereotyping, prejudice and discrimination were asked to rate each of Cheng et al.'s original list of 106 positive and negative adjectives as a classroom exercise. As well, 30 additional positive and negative

Canadian cultural descriptors (generated from discussion and a Google search) were included in the list (Appendix G). The students rated each word on a scale from 1 (least like) to 5 (most like) for East Asians, South Asians, and Canadians. A list of the ten most chosen words was generated for each culture. The East Asian and South Asian lists overlapped significantly, as expected; seven out of ten were the same words. To round out the list of ten heritage prime words, an additional three words were chosen from the top 15 words rated for both South and East Asian groups.

The ten characteristics chosen most frequently by participants to describe Canadians included only one of the characteristics from Cheng et al.'s list of American descriptors – "Valuing equality." The rest of the top ten list did not match the U.S. descriptors. Therefore, the decision was made to use the Canadian list in the current study. Although negative adjectives were included in the original list, none of them were highly rated as good descriptors of either Asian or Canadian cultures, and so the lists included only positive descriptors.

The Asian characteristics list was used in the heritage culture prime condition. The Canadian characteristics list was used in the host culture prime condition. Participants in each condition completed a word search puzzle using the ten words associated with either Asian or Canadian positive cultural stereotypes.

Measures

Independent variables

Cultural competence. Cultural competence was assessed with an adapted version of the *Stephenson Multigroup Acculturation Scale (SMAS;* Stephenson, 2000) (Appendix B). As previously discussed, acculturation theories focus on individuals' motivation to

participate in one or both cultures. However, an analysis of acculturation measures

indicates that many of them are assessing behaviours that display cultural participation

and demonstrate aspects of cultural competence as defined by LaFromboise et al. (1993).

Stephenson's (2000) 32-item measure includes an Ethnic Society Immersion scale (which

in the present study is referred to as the Heritage Culture Scale) and a Dominant Society

Immersion scale (or Host Culture Scale in the present study). Stephenson generated the

items comprising each of the scales from a large pool that was eventually reduced to 17

statements for the Heritage Culture Scale and 15 items for the Host Culture Scale.

The Heritage Culture Scale includes 17 statements defined in the present study as

assessing degree of competence in the heritage culture. Ten of these statements tap into

the participant's heritage language ability and preference (e.g., "I feel comfortable

speaking the language of my heritage country"). Seven items ask about heritage culture

knowledge (e.g., "I am informed about current affairs in my heritage country").

The 15-item Host Culture Scale assesses degree of competence in the host culture.

Five items tap into the participant's English language ability and preference (e.g., "I

understand English, but I'm not fluent in English"). Eight items ask about Canadian

mainstream culture knowledge (e.g., "I am informed about current affairs in Canada").

Two statements were removed from the Host Culture Scale: "I feel at home in Canada"

and "I feel accepted by (Anglo) Canadians" because they had too much conceptual

overlap with cultural motivation as defined in the present study. Therefore, the adapted

SMAS Host Culture scale used in the present study included 13 rather than 15 items. All

statements were answered using 4-point Likert scales that allowed participants to pick

from four options: false, partly false, partly true, or true. One of the statements on the

Heritage Culture Scale and one statement on the Host Culture Scale was reverse-scored. A high score on the Heritage Culture Scale was interpreted in the present study to indicate high competence in heritage culture behaviours, and a high score on the Host Culture Scale indicated high competence in host culture behaviours.

Cultural motivation. Cultural motivation was assessed with the identification subscale from the *Abbreviated Multidimensional Acculturation Scale (AMAS-ZABB;* Zea, Asner-Self, Birman, & Buki, 2003; Appendix B). The AMAS-ZABB was developed for and has been validated using Latino/Latina samples. However, the scale format makes it adaptable to other cultures. The AMAS-ZABB includes four subscales, two of which are defined by the authors as assessing cultural competence (one for heritage and one for host culture). These subscales were not used in the present study because in the judgment of the researcher they do not measure cultural competence as comprehensively as the SMAS (due to their primary focus on language ability).

Two of the AMAS-ZABB subscales, the 6-item Heritage Culture Identification Scale and the 6-item Host Culture Identification Scale, consist of parallel heritage and host culture items (e.g., "I am proud of being a member of my heritage culture" and "I am proud of being Canadian"). Zea et al. (2003) interpreted a high score on the Heritage Culture Identification Scale as indicating strong identification with the heritage country and a high score on the Host Culture Identification Scale as indicating strong identification with the host culture. In the present study greater identification was interpreted as greater motivation. Participants responded to each statement on a 4-point Likert-type scale: strongly disagree, disagree, agree, or strongly agree.

Dependent variable

The experimental hypothesis was tested using Singelis's (1994) Interdependent-Independent Self-Construal Scale (SCS; Appendix E), which consisted of two 12-item subscales. The Interdependence Scale includes items tapping the manifestation of cultural collectivism at the level of individual self-construal, such as "I respect people who are modest about themselves." The Independence Scale taps the manifestation of cultural individualism at the level of individual self-construal, with items such as "I am comfortable with being singled out for praise or reward." This instrument uses a 7-point Likert-type scale that ranges from 1 (*strongly disagree*) to 7 (*strongly agree*). All participants completed both Interdependent and Independent subscales. However, for experimental hypothesis testing, only the scale that matched the priming condition was used. For participants in the heritage culture priming condition, the dependent measure was their score on the Interdependence Scale. For participants in the host culture priming condition, the dependent measure was their score on the Independence Scale.

CHAPTER III

Results

Preliminary Analyses

Reliability

Reliability analyses indicated that all the scales used in the present study had high reliability. The analysis of the 17-item Stephenson Heritage Culture Scale, defined in the present study as assessing heritage cultural competence, yielded a Cronbach's $\alpha = .90$. Reliability analysis of the 13-item Stephenson Host Culture Scale resulted in a Cronbach's $\alpha = .81$, indicating that it can be used as a single scale to measure host cultural competence. Therefore, both scales were used without alteration in subsequent analyses.

Reliability analysis of the Heritage Culture Identification Scale, defined in the present study as measuring heritage cultural motivation, produced a Cronbach's $\alpha = .91$. Reliability analysis of the Host Culture Identification Scale, defined in the present study as measuring host cultural motivation, indicated a Cronbach's $\alpha = .93$. Both scales were used in the analyses in the form in which they had been administered.

Reliability analysis of the 12-item Singelis Interdependence Scale, interpreted in the present study as reflecting individual values associated with collectivism and therefore more closely related to East and South Asian heritage cultures, produced Cronbach's $\alpha = .80$. Reliability analysis of the 12-item Singelis Independence Scale, measuring individual values associated with the relatively individualistic Canadian host culture, indicated Cronbach's $\alpha = .82$. Both scales were used in subsequent analysis as they had been administered.

Descriptive Statistics

Examination of the means and standard deviations for each of the relevant scales is shown in Table 1. Overall, the study participants scored very high on both heritage and host cultural competence and heritage and host cultural motivation. The mean for heritage cultural competence was 3.0 on a 4-point scale, and the mean for host cultural competence was 3.4 on a 4-point scale. Motivation scores were also high with the mean for both heritage and host cultural motivation at 3.4 on a 4-point scale. *T*-tests indicated that the host and heritage groups did not score differently from each other on any of the measures.

As indicated in Table 2, *Levene's* test of homogeneity of variance was not significant for any of the subscales in either of the priming conditions, indicating that the variables had comparable variance. The *K-S* test for normality indicated that, for cultural competence scales in the host culture priming condition, the distribution of scores met the assumptions of normality and homogeneity of variance. However, host and heritage cultural motivation scales in both the heritage and host culture priming conditions were significantly negatively skewed. This means that a substantial proportion of the scores were concentrated at the high end of the distribution. Attempts to correct the distributions using transformations and removing outliers did not change the skewness of the distributions; therefore hypothesis testing was done using the original data.

With regard to overall scores on interdependence and independence scales, examination of the means in Table 1 indicates that participants in both cultural prime conditions scored higher on interdependence than on independence, indicating that participants in general were higher on interdependence regardless of priming condition.

The two culture prime condition groups did not differ significantly on either interdependence or independence scale scores, with $t(1,63) = 1.39$, $p = .17$ and $t(1, 63) = -.13$, $p = .84$, respectively.

Examination of Table 3 indicates that, overall, the correlational analysis supports the hypothesized relationships among the independent and dependent variables. Heritage cultural competence and heritage cultural motivation were significantly positively correlated. Heritage cultural competence and heritage cultural motivation were also significantly positively correlated with interdependence. However, neither heritage cultural competence nor heritage cultural motivation correlated significantly with independence.

A similar pattern was observed for host culture scales. A significant positive relationship was shown between host culture competence and host culture motivation. As well, both host cultural competence and host cultural motivation were significantly positively correlated with independence; however neither host culture competence nor host culture motivation correlated significantly with interdependence. Interestingly, there were significant negative correlations between heritage cultural competence and host cultural competence, as well as heritage cultural competence and host cultural motivation.

Table 1

Heritage and Host Culture Competence and Motivation Means, Standard Deviations, Skewness and Kurtosis

Measure	Heritage Culture Prime (*N*=33)				Host Culture Prime (*N*=32)			
	M	*SD*	Skewness	Kurtosis	*M*	*SD*	Skewness	Kurtosis
Heritage Culture Competence	3.10	.52	-.36	-.49	2.96	.69	-.59	-.67
Host Culture Competence	3.41	.52	-1.43*	1.45	3.45	.43	-.80	.74
Heritage Culture Motivation	3.47	.57	-1.22*	.86	3.43	.62	-.67*	-1.08
Host Culture Motivation	3.28	.68	-1.03*	.68	3.34	.67	-.55*	-1.00
Interdependence	5.17	.75	.32	-.45	5.42	.73	.17	-.35
Independence	4.91	.93	.38	-.81	4.93	.81	-.48	.21

Note. Culture Competence and Motivation means are based on 4-point scale; Interdependence and Independence means are based on 7-point scale.

* *Kolmogorov-Smirnov (K-S)* test of normality was significant (*p*<.05), indicating a violation of the normality assumption.

Table 2

ANOVA Assumptions Tests

| | K-S Test of Normality | | Levene's Test of Homogeneity |
| | Heritage Prime (1,32) | Host Prime (1,31) | All Participants (1,64) |
Measure			
Heritage Culture Competence	.07	.13	3.60
Host Culture Competence	.20**	.10	.88
Heritage Culture Motivation	.23***	.22***	1.00
Host Culture Motivation	.15*	.20**	.31

* p<.05.   ** p<.01.   *** p<.001.

Table 3

Correlation Table of Independent and Dependent Variables (N=65)

Measures	Heritage Culture Motivation	Host Culture Competence	Host Culture Motivation	Interdependence	Independence
Heritage Culture Competence	.58***	-.35**	-.27*	.36**	-.03
Heritage Culture Motivation		-.16	-.11	.31**	.11
Host Culture Competence			.51***	.06	.36**
Host Culture Motivation				.12	.46***
Interdependence Scale					.12

p<.05.   ** p<.01.   *** p<.001

Principal Analysis

The test of the experimental hypothesis required a comparison of low and high heritage competence and motivation Heritage Culture Prime participants' scores on the Interdependence Scale with low and high host competence and motivation Host Culture Prime condition participants' scores on the Independence Scale. Based on the anticipated skewness of a university sample towards higher competence and higher motivation, the decision was made prior to data collection to use scale midpoints rather than a median split to divide participants into low and high competence and motivation groups.

As indicated in Table 4, participants in each prime condition were initially divided into high and low heritage and host culture competence and high and low heritage and host culture motivation groups based on their scores above or below the numerical midpoint on the relevant competence and motivation scales. Participants in the heritage and host cultural prime conditions who scored above 34, the numerical midpoint on the heritage cultural competence scale, were coded as high competence. Participants in the heritage and host cultural prime condition who scored above 26, the numerical midpoint on the host cultural competence scale, were coded as high competence. The same procedure was used to split high and low motivation participants (using the midpoint score of 12).

However, as indicated in Table 4, the actual sample was even more skewed toward both high competence and high motivation than had been anticipated. As a result, there were too few participants to conduct either the planned analysis of variance or the planned comparison between high competence/high motivation and low competence/low motivation participants.

Therefore, the decision was made to divide participants into high and low competence and motivation groups based on a median split. The medians for each scale are indicated in Table 5. Table 6 shows the means and standard deviations for the median-split experimental groups.

Table 4

Scale Midpoint Interdependence and Independence Means for High and Low Competence and Motivation Heritage and Host Culture Participants

Measure	Heritage Culture Prime Condition				Host Culture Prime Condition			
	Interdependence Scale		Independence Scale		Interdependence Scale		Independence Scale	
	N	M(SD)	N	M(SD)	N	M(SD)	N	M(SD)
High Comp/High Motivation	31	5.22(.81)	23	5.12(.93)	21	5.56(.70)	31	4.93(.16)
High Comp/Low Motivation	1	4.33(-)	2	5.38(.88)	3	5.44(1.27)	1	5.17(-)
Low Comp/High Motivation	1	4.25(-)	4	4.27(.22)	5	5.07(.46)	0	-
Low Comp/Low Motivation	0	-	4	4.06(.77)	3	5.00(.65)	0	-
Total	33	5.17(.75)	33	4.91(.93)	32	5.42(.73)	32	4.93(.81)

Note. Within each prime condition, for participants' scores on the Interdependence scale, the participants were divided based on their high and low competence and high and low motivation scores on the heritage culture scales. For participants' scores on the Independence scale, the participants were divided within each prime condition based on their high and low competence and high and low motivation scores on the host culture scales.

Table 5

Median Scores for Host and Heritage Competence and Motivation Scales

Measure	Heritage Prime Condition (*N*=33)	Host Prime Condition (*N*=32)	All Participants (*N*=65)
Heritage Competence	53	52	53
Host Competence	47	45	46
Heritage Motivation	22	22	22
Host Motivation	20	21.5	20

Note. Heritage Competence had a maximum score of 68; Host Competence scale had a maximum score of 52; Both Heritage and Host Motivation scales had a maximum score of 24.

Table 6

Median Split Means on Interdependence and Independence Scales for High and Low Competence and Motivation Heritage and Host Culture Participants

| Measure | Heritage Culture Prime Condition | | | | Host Culture Prime Condition | | | |
| | Interdependence Scale Score | | Independence Scale Score | | Interdependence Scale Score | | Independence Scale Score | |
	N	M(SD)	N	M(SD)	N	M(SD)	N	M(SD)
High Comp/High Motivation	12	5.38(.89)	12	4.97(.83)	8	5.56(.65)	10	5.33(.67)
High Comp/Low Motivation	5	5.53(.57)	4	4.37(.28)	7	5.76(.72)	7	5.10(.47)
Low Comp/High Motivation	4	5.15(.25)	5	5.32(.90)	5	5.05(.82)	5	4.85(.90)
Low Comp/Low Motivation	12	4.81(.69)	12	4.85(1.15)	12	5.28(.72)	10	4.47(.93)
Total	33	5.17(.75)	33	4.91(.93)	32	5.42(.73)	32	4.93(.81)

It will be recalled that the experimental hypothesis was that, in response to a culture-specific cognitive prime, individuals with high levels of competence and motivation with reference to the culture being primed would score significantly higher on a culturally-congruent measure of interdependence/independence than individuals with low levels of competence and motivation. The hypothesis was tested using a 2 (heritage or host prime) x 2 (high or low competence) x 2 (high or low motivation) analysis of variance with cultural congruence score as the dependent variable. The relevant means can be found in Table 7.

The planned comparison of the high competence/high motivation mean ($M = 5.36$, $SD = .78$) to the low competence/low motivation mean ($M = 4.65$, $SD = .81$) was significant, $t(1,44) = 2.99$, $p<.01$, indicating that, as predicted, individuals with high levels of competence and motivation with reference to the culture being primed scored significantly higher on a culturally-congruent measure of interdependence or independence than individuals with low levels of competence and motivation. As indicated in Table 8, the significant main effect for cultural competence, $F(1, 65) = 3.88$, $p = .05$, $\eta^2=.06$, on the analysis of variance suggests that the significant difference between high competence/high motivation and low competence/low motivation participants is due primarily to competence rather than motivational differences.

Table 7

Mean Scores for High and Low Competence and Motivation Participants on Interdependence Scale (for Heritage Culture Prime) and Independence Scale (for Host Culture Prime)

	Heritage Culture Prime		Host Culture Prime		All Participants	
	Interdependence Scale Score		Independence Scale Score		Prime Congruent Scale Scores	
Measure	N	*M(SD)*	N	*M(SD)*	N	*M(SD)*
High Comp/High Motivation	12	5.38(.89)	10	5.33(.67)	22	5.36(.78)
High Comp/Low Motivation	5	5.53(.57)	7	5.10(.47)	12	5.19(.80)
Low Comp/High Motivation	4	5.15(.25)	5	4.85(.90)	9	5.11(.39)
Low Comp/Low Motivation	12	4.81(.69)	10	4.47(.93)	22	4.65(.81)
Total	33	5.17(.75)	32	4.93(.81)	65	5.30(.78)

Table 8

Analysis of Variance of Culturally Congruent Interdependence and Independence Scores

Source	df	F	η^2	p
Corrected Model	7	2.00	.19	.08
Cultural Prime	1	1.94	.03	.17
Competence	1	3.88	.06	.05*
Motivation	1	2.61	.04	.11
Prime x Competence	1	.18	.00	.67
Prime x Motivation	1	1.32	.02	.26
Competence x Motivation	1	.63	.01	.43
Prime x Competence x Motivation	1	.10	.00	.67
Error	57			

CHAPTER IV

Discussion

This study set out to investigate whether bicultural individuals with strong cultural competence and cultural motivation in the primed culture were more likely to respond in a prime-congruent manner than individuals with weaker cultural competence and motivation in that culture.

The study hypothesis was supported, showing a significant difference between participants with strong competence and motivation as compared to those with relatively weaker competence and motivation in the primed culture. The study also found a main effect for cultural competence, suggesting that the predicted difference between high competence/high motivation and low competence/low motivation participants may be attributed primarily to differences in heritage or host cultural competence.

Cultural Framing

Cultural framing has been conceptualized as the weakening and strengthening of culturally related networks of meaning. Though originally defined as "switching" from one cultural frame to another, recent evidence seems to point to the idea that the networks are likely integrated, and the switch is more of a shift. The current study chose to explore this concept by examining whether in response to a cultural prime the relevant interdependence or independence score was higher for those with strong cultural competence and motivation. The hypothesis was tested with bicultural participants whose heritage cultures have been shown in past research to be more collectivistic (manifested on the individual level as interdependent self-construal) than the relatively individualistic Canadian culture (demonstrated on the individual level as independent

self-construal).

The study hypothesis was supported. Participants who had stronger cultural competence and cultural motivation had higher congruency scores than those who had weaker competence and motivation. This is an indication that they were more responsive to the prime. The scores of participants in the opposite-primed condition did not follow the same pattern as the primed group. For example, in the host-primed condition, the high host competence/high host motivation group had a mean of 5.33 (SD = .67) and the low host competence/low host motivation group had a mean of 4.47 (SD = .93) on the independence scale. These means were significantly different. An examination of the independence means for the heritage-primed participants showed that there is no difference between the means of the high host competence/high host motivation and the low host competence/low host motivation groups. Since experimentally the only difference between the two conditions was the cultural prime, this difference can be attributed to the effect of priming.

When primed, the participants used the cue to organize information using the specific cultural frame in mind. The difference between those participants who can apply this frame of organization, because of competence and motivation in the relevant culture, and those who cannot became apparent. When participants were not cued with that specific culture, those cultural concepts were still available to them, but the responses were not coherently organized because no relevant cultural expectations was apparent to the individual.

This finding is consistent with Goffman's original theory of framing, which suggests individuals are immersed in many frames simultaneously (Diehl & McFarland,

2010). Frames give individuals a way to organize information in order to quickly

interpret it. This study supports the conceptualization of cultural frames as loose

networks of ideas where relationships between concepts get activated through cues in the

environment.

It is worth noting that in the present study, the overall group mean on the

interdependence measure was as high for the non-primed (host cultural prime)

participants as for the primed (heritage cultural prime) participants. The overall group

means on the independence measure was also equal for both primed (host culture prime)

and non-primed (heritage culture prime) participants. Overall, the interdependence

means were higher than the independence means. This finding seems to suggest that the

interdependent mindset that the participants were raised with pervades regardless of

situational cues. It is possible that interdependence represents a "core" element of a

heritage cultural identity that is resistant to erosion despite the individual being in a new

context (Rosenthal & Feldman, 1992). Other research studies support this finding. For

example, when Chinese-American participants were put under time pressure or had to

perform a concurrent task, they were more likely to make heritage culture attributions,

even if they had been primed with host culture cues (Hong & Mallorie, 2004).

Cultural priming focuses on accessing the cultural frames that are already stored

in the individual's cognitive system. However, two other factors affect whether priming

can cue the congruent frame of mind. Those two factors are the availability and the

situational applicability of the cultural frame (Hong & Mallorie, 2004). Availability can

be interpreted as the baseline cultural knowledge (or competence), and situational

applicability is the individual's decision whether the frame is appropriate to the situation

(or motivation). The current study supports the theory that these factors are important to cultural congruence.

Cultural Competence and Cultural Motivation

LaFromboise et al. (1993) provided a framework for defining cultural competence, which they described as the necessary cultural skills to be able to act within a cultural worldview, but without necessarily adopting said worldview. The more an individual is exposed to intercultural interaction, the more cultural competence the individual develops to navigate that culture. LaFromboise et al.'s (1993) competence framework also included the need to build a cultural identity in order to effectively use cultural competence skills. Motivation to identify with a culture is hypothesized to reduce the stress associated with deciding between conflicting worldviews and would make one more likely to produce appropriate cultural attitudes. Thus, it makes intuitive sense that motivation to apply cultural competence skills would play a part in one's expression of culturally appropriate attitudes and behaviours.

However, LaFromboise et al.'s framework does not separate competence and motivation into separate factors. They are not alone in conceptualizing acculturation in this way. Acculturation has been defined as the changes that occur between individuals due to cultural contact. These changes involve behavioural, emotional, and cognitive components (Ward, Bochner, & Furnham, 2001). Few sources explicitly refer to cultural competence and cultural motivation as separate and possibly orthogonal components in the acculturation process. Berry and colleagues (1989) do suggest that one element of acculturation is the attitude the individual has towards how much they want to be involved in a given culture. As a result, although acculturation models may allude to a

number of factors such as competence, personality, cultural identity, and values, the recognition of these variables rarely seems to translate into acculturation measurement.

Taras (2008) compiled a comprehensive list of 60 acculturation scales from which it can be determined that approximately 37% of scales measured only behavioural competence, while 24% focused primarily on competence but contained several items regarding identification. Twenty percent of the scales contained an identification (usually culture-specific) subscale, which in the context of the present study could be interpreted as measuring motivation.

In the present study, motivation to identify with a culture was treated explicitly as a separate factor from cultural competence. Researchers on ethnic identity endorse this distinction because while heritage competence can, for example, decrease between generations of immigrant biculturals, their desire to be considered a part of their heritage culture can stay strong, or even become stronger in subsequent generations (Padilla & Perez, 2003).

In support of this distinction, the present study found a significant difference in congruence scores between the high competence/high motivation and the low competence/low motivation group. Those participants who scored high on the combination of cultural competence and cultural motivation had significantly higher congruence on the interdependence/independence congruence measure than those who scored low on the two factors. Although no main effect for cultural motivation and no interaction between competence and motivation were observed, differences between groups were only observed when both competence and motivation were high or low. There were no differences between groups who were only high on one factor and low on

the other in terms of cultural congruence. This may suggest that competence is not the only factor that influences congruence. Motivation may in fact play an important role that could not be observed with the current sample. Although cultural competence undoubtedly seems to be the larger contributing factor, the role of cultural motivation as separate from competence cannot be discounted.

The separation of competence and motivation to identify with a culture make sense if acculturation is considered within a utilitarian context. Studies of business sojourners have shown that individuals can adapt to a new cultural context without necessarily identifying with the host culture (Bhawuk, 2001; Ward & Kennedy, 1999). More recently, competence has been conceptualized as cultural intelligence, or a system of interacting cultural skills and metacognition, which is used as an education tool for those who have to work in another culture (Thomas et al., 2008). Likewise, Berry's theory suggests that some immigrants may choose to endorse the separation acculturation strategy where they choose to focus on reducing cultural contact and focusing on preserving the heritage culture. Gandara's (1982) study shows that individuals who choose the separation acculturation strategy nevertheless develop competence in the host culture in order to succeed in the dominant culture. However, that has no implication for whether the individual is also motivated to identify with the host culture. The conceptualization of competence and motivation as separate factors in acculturation allow for the separation strategy to be a viable and successful option for biculturals. Future efforts should be devoted to developing better universal measures that measure different acculturation factors separately and comprehensively.

It is also important to note that the present sample was dramatically skewed

toward the high competence/high motivation end of the scale, with very little variation in scores. Yet it was still possible to find significant differences on culturally congruent interdependent or independent self-construals. It is suggested that a sample with a wider range of competence and motivation scores would show more dramatic differences in cultural congruence.

Strengths and Limitations

The present study contributes to cultural framing research in several ways. First, the study distinguishes between competence and motivation to acculturate. Many previous studies assume that both are part of the same construct, with motivation usually measured by only one or two items. This study not only defines competence and motivation as separate constructs that are together responsible for acculturation, but also attempts to tease the two constructs apart in the measurement. Second, this is the first study that looks at the acculturation level of the individual and its effect on cultural congruence. Whereas the majority of studies seem to assume that all bicultural people can shift cultural frames, this study looks at whether a shift really occurs and specifically investigates factors that make one more likely to use this cognitive technique. Lastly, although the focus of this study was an examination of the effect of cultural competence and cultural motivation on responsiveness to cultural primes, the design of the study permitted the examination of competence and motivation in both cultures as well as participants' scores on both independence and interdependence. This approach helped to shed light on how participants feel about being a part of both cultures, and showed that in this sample, bicultural individuals displayed high competence and motivation to participate in both cultures. The outcome measures confirmed that both worldviews

seem to be internalized and endorsed.

This study has several limitations. One of the major limitations is the skewed distributions of the competence and motivation scales. The sample in this study was heavily skewed toward the higher end on the scale for cultural competence and cultural motivation in both cultures. All participants had a high base level of cultural competence. All participants were competent in the English language, had lived in Canada for at least 3 years, and could interact with social institutions enough to be able to attend a Canadian university and get involved in a study. Self-selection bias was also present with regard to motivation since individuals with little interest in either of their cultures might have been less likely to sign up for such an experiment. Transforming the data did not adjust the skewness of the distributions. Originally experimental group classification was supposed to be performed using the scale midpoints. It was expected that the independent variable scores would be skewed towards the high end of the scales. The scale midpoints would have allowed us to compare the true high and low groups. However, this proved to be an ineffective technique because the sample was more heavily skewed than anticipated, which left no participants in many of the cells in the factorial. To adjust for this, it became necessary to use the median split instead, so that we could at least compare the lowest scores in the sample to the highest scores. Therefore, the results must be considered with caution.

The small sample size was another limitation. Ideally, this experiment would have included a minimum of 15 participants in each cell, but time constraints precluded the continuation of data collection until this goal was reached, as well as difficulty getting participants who are in the low competence and low motivation group. Due to the

limitations of the sample, it is possible that our statistical tests simply did not have enough power to observe a significant difference between groups.

This study used a sample of university students, which has potential limitations. University students are more likely to be in a high competence and high motivation group because by nature of being a student, they are exposed to a lot of intercultural interaction. This could have contributed to the lack of participants who are lower on competence and motivation.

The present study used a between subject design in which half the participants were primed with heritage culture cues and half with host culture cues. There is an implicit assumption that participants have shifted on the outcome measure from their initial point on the continuum. However, there is no pre-test measure before priming, so results should be interpreted with caution. The present experiment would have been stronger if it was a within, repeated measure design, where all participants completed a pre-test interdependence-independence measure, and were then primed for both cultures. Alternatively, the study design could have implemented a control condition with no cultural prime to use for comparison with the two primed groups. However due to time and sampling constraints, these designs were too difficult to execute. The study design was therefore modeled after other similar studies in the literature.

There is a limitation to using interdependence/independence as an outcome measure. There is a problem with the assumption that those who are in their heritage frame of mind would necessarily be more interdependent and those who are in the Canadian frame of mind are more independent. Although there is some evidence that this is the case, Hofstede's (1997) original findings are disputed by some (Oyserman, Coon,

& Kemmelmeier, 2002). Most other studies, however, look at American population rather than Canadian. It is possible that Canadian culture is not quite as distinctly independent.

The last limitation is the cultural prime used in the study. Because the sample came from a wide range of cultures in South and East Asia, the heritage prime words had to be very general in terms of the words that we could use. It is possible that to certain participants these words did not apply, as they did not accurately describe their heritage culture. In that case, the prime would not work the way it was intended. During the debriefing, participants discussed what they thought of the priming manipulation. In general, participants agreed that the words were accurate descriptions of the two cultures, or were immediately able to guess which condition they participated in. As well, priming materials in both conditions were administered in English, which could have interfered with the heritage prime, making it weaker. However, because of the diverse group of participants that was used, we could not administer the questionnaires in everyone's heritage language.

Implications and Future Research

This study contributed to the growing literature on cultural framing by exploring the effect of cultural competence and cultural motivation on culturally congruent attitudes. Previous studies, although implicitly assumed that participants are capable in both cultures, did not measure the participants' acculturation prior to priming them. Because of this, some studies found puzzling results with reactive responses. This study focused its attention on measuring the participants' acculturation in terms of competence and motivation toward culture participation, and how those factors affect the participants'

congruency to the culture being primed.

This study also measured cultural competence and cultural motivation separately, which has not been previously done in a culture framing study. Acculturation theory describes adjustment in both skills and desire to participate in a culture, but rarely do the measurement instruments represent this distinction. Though the hypothesis was only partially supported, this study demonstrated that participants' level of competence is separate from their motivation. A high score on one of the measures does not imply the same for the other, and individuals could experience high motivation but low competence, and vice versa. The results of this study show robust evidence that cultural competence is an important factor in cultural congruence.

This study is also the first to measure participants on both interdependent and independent outcomes after being primed. This design allowed for better interpretation of the congruence scores because it was possible to see if the same pattern was present for the outcomes opposite of prime condition. Although not a perfect design, the lack of the same pattern on the outcome measure that has not been primed suggests that priming had an effect on congruence.

More evidence is needed for the role of motivation. Future research needs to focus on acquiring a sample that is more diverse in terms of level of motivation. It is suggested that future research use different sampling procedures, such as recruiting outside of university campus or perhaps administering the experiment in the participants' heritage language to acquire participants who may have lower motivation in the host culture. Future research in cultural framing should also pretest participants or include an unprimed control condition.

Future research in cultural framing should also focus on exploring whether the shift is a true phenomenon by pretesting participants or by including a control condition that is not primed for comparison. The assumption that a shift happens without preliminary testing is a big one. Although it rings true to bicultural individuals, the mechanism is in need of being illuminated empirically to more accurately describe the bicultural experience.

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Appendices

Appendix A

ANOVA Factorial Design

	Heritage Prime condition		Host Prime condition	
Independent variable groups	High heritage competence & high heritage motivation	High heritage competence & low heritage motivation	High host competence & high host motivation	High host competence & low host motivation
	Low heritage competence & high heritage motivation	Low heritage competence & low heritage motivation	Low host competence & high host motivation	Low host competence & low host motivation
Dependent Variable	Interdependence score		Independence score	

Figure 1. 2 (heritage or host culture prime) x 2 (high or low cultural competence) x 2 (high or low cultural motivation) between-subjects factorial design

Independent Variable Measures

Stephenson Multigroup Acculturation Scale (SMAS)

Instructions: Below are a number of statements that evaluate changes that occur when people interact with others of different cultures or ethnic groups. For questions that refer to Canada, please think of English-speaking Canada and Canadians. For questions that refer to "heritage country," please think of the country your family originally came from. For questions referring to "language of heritage country," please think of the language spoken in the country your family originally came from. Circle the answer that best matches your response to each statement.

	False	Partly false	Partly true	True
1. I understand English, but I'm not fluent in English. (He)	1	2	3	4
2. I am informed about current affairs in Canada. (Ho)	1	2	3	4
3. I speak the language of my heritage country with my friends and acquaintances from the same country. (He)	1	2	3	4
4. I have never learned to speak the language of my heritage country. (He – reverse code)	1	2	3	4
5. I feel totally comfortable with Canadian people. (Ho)	1	2	3	4
6. I eat traditional foods from my heritage culture. (He)	1	2	3	4
7. I have many Canadian acquaintances. (Ho)	1	2	3	4
8. I feel comfortable speaking the language of my heritage country. (He)	1	2	3	4
9. I am informed about current affairs in my heritage country. (He)	1	2	3	4
10. I know how to read and write in the language of my heritage country. (He)	1	2	3	4
11. I attend social functions with people from my heritage country. (He)	1	2	3	4
12. I speak the language of my heritage country at home. (He)	1	2	3	4
13. I regularly read magazines of my heritage group. (He)	1	2	3	4

14. I know how to speak the language of my heritage country. (He)	1	2	3	4
15. I know how to prepare Canadian foods. (Ho)	1	2	3	4
16. I am familiar with the history of my heritage country. (He)	1	2	3	4
17. I regularly read a Canadian newspaper. (Ho)	1	2	3	4
18. I like to listen to music of my heritage group. (He)	1	2	3	4
19. I like to speak the language of my heritage country. (He)	1	2	3	4
20. I feel comfortable speaking English. (Ho)	1	2	3	4
21. I speak English at home. (Ho)	1	2	3	4
22. I speak my heritage language with my spouse or partner. (He)	1	2	3	4
23. When I pray, I use my heritage language. (He)	1	2	3	4
24. I attend social functions with Canadian people. (Ho)	1	2	3	4
25. I think in the language of my heritage country. (He)	1	2	3	4
26. I stay in close contact with family members and relatives in my heritage country. (He)	1	2	3	4
27. I am familiar with important people in Canadian history. (Ho)	1	2	3	4
28. I think in English. (Ho)	1	2	3	4
29. I speak English with my spouse or partner. (Ho)	1	2	3	4
30. I like to eat Canadian foods. (Ho)	1	2	3	4

*** For scoring purposes Ho represents host culture subscale, He represents heritage culture subscale

Cultural Identification Measure

Abbreviated Multidimensional Acculturation Scale – Identity Subscale (Zea, Asner-Self, Birman, & Buki, 2003) based on Phinney and Devich-Navarro (1997) American Identity measure items.

The following section contains questions about your *heritage culture.* By *heritage culture* we are referring to the culture of the country either you or your parents originally came from (e.g., Japan, China, Pakistan, Indian). If you come from a multicultural family, please choose the culture you relate to the most.

Instructions: Please mark the number from the scale that best corresponds to your answer.

	Strongly disagree	Disagree	Agree	Strongly agree
1. I think of myself as being Canadian.	1	2	3	4
2. I feel good about being Canadian.	1	2	3	4
3. Being Canadian plays an important part in my life.	1	2	3	4
4. I feel that I am part of Canadian culture.	1	2	3	4
5. I have a strong sense of being Canadian.	1	2	3	4
6. I am proud of being Canadian.	1	2	3	4
7. I think of myself as being a member of my heritage culture.	1	2	3	4
8. I feel good about being a member of my heritage culture.	1	2	3	4
9. Being a member of my heritage culture plays an important part in my life.	1	2	3	4
10. I feel that I am a part of my heritage culture.	1	2	3	4
11. I have a strong sense of being a member of my heritage culture.	1	2	3	4
12. I am proud of being a member of my heritage culture.	1	2	3	4

Spatial Ability Test – Paul Newton and Helen Bristoll

Which figure is identical to the first? (Circle the letter under the figure)
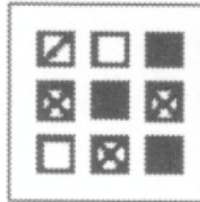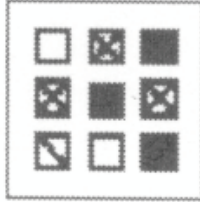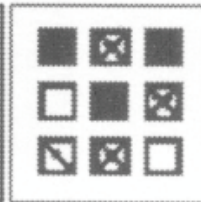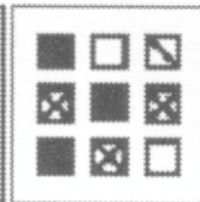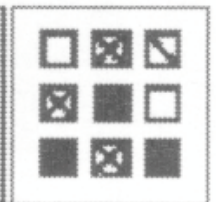
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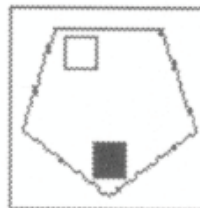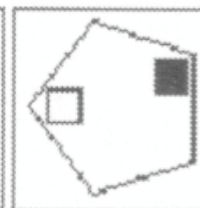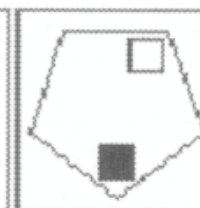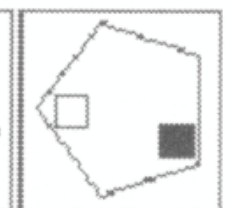
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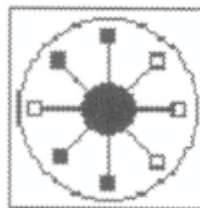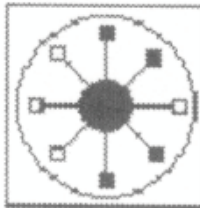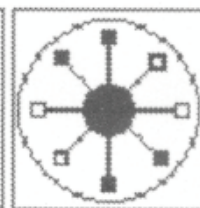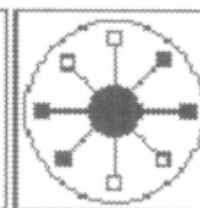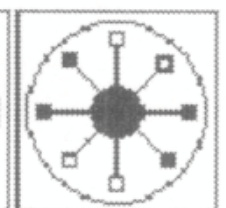
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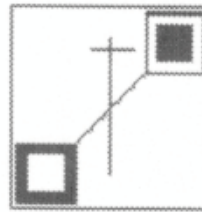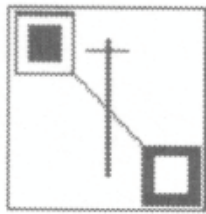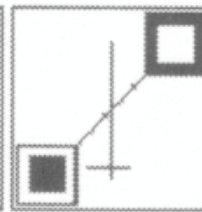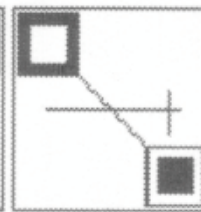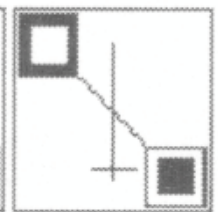
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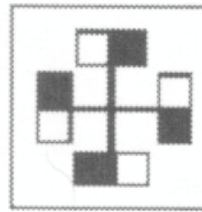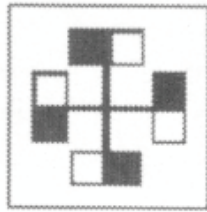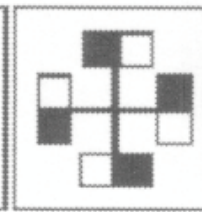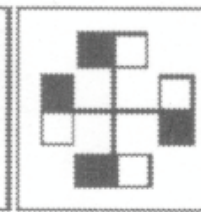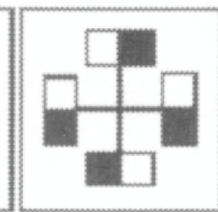
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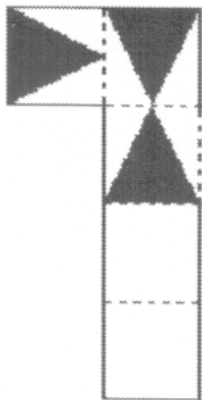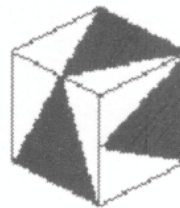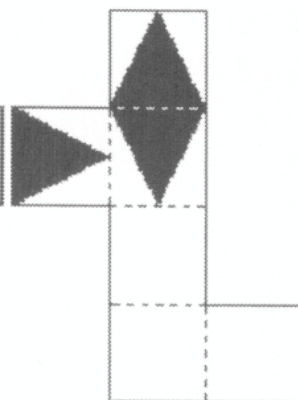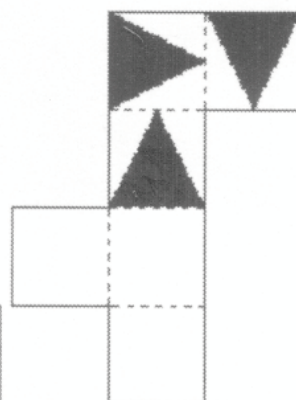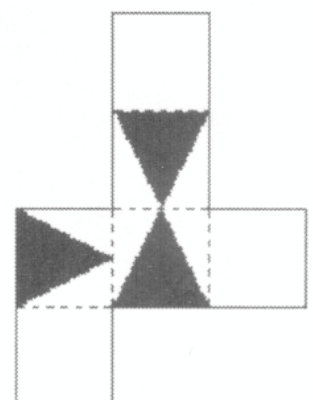
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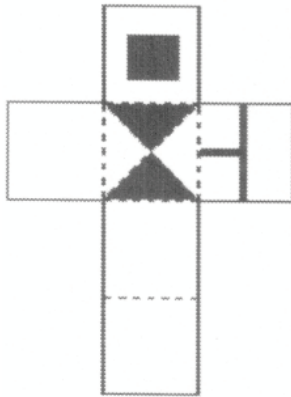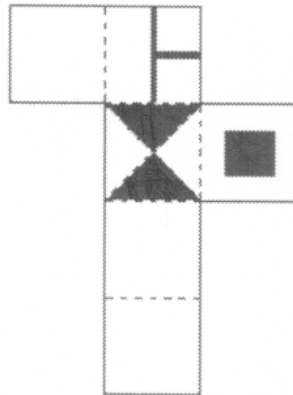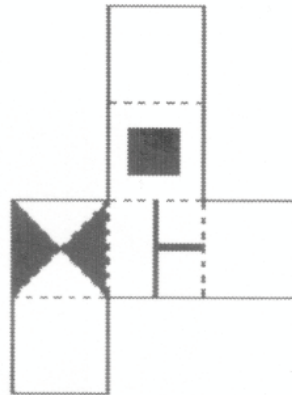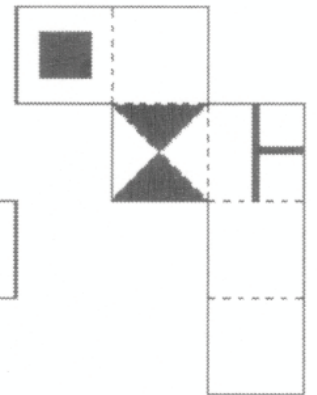
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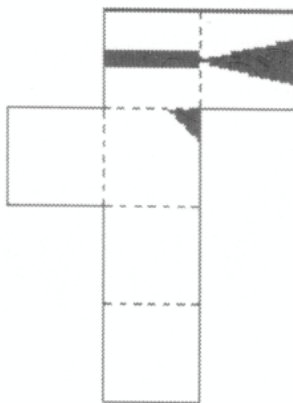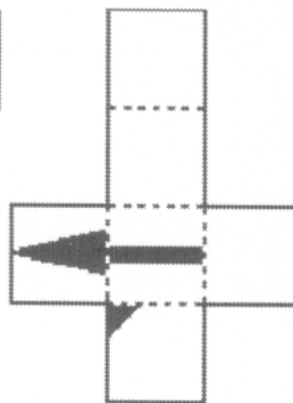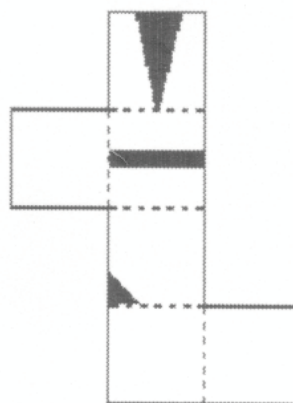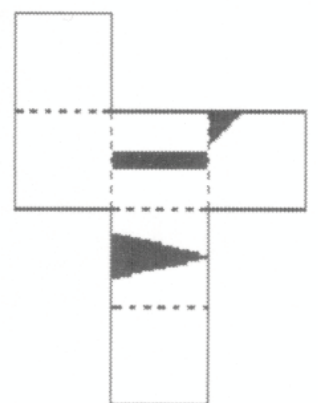
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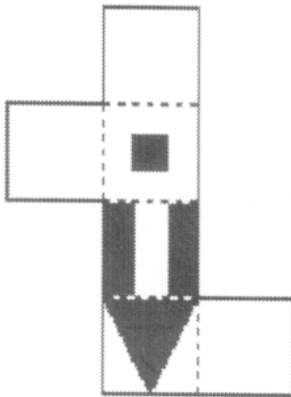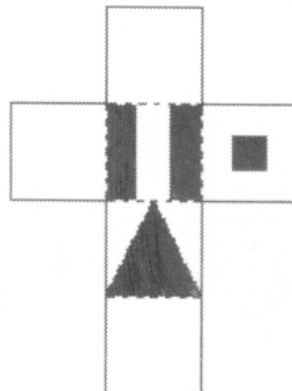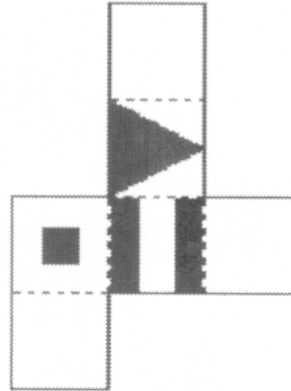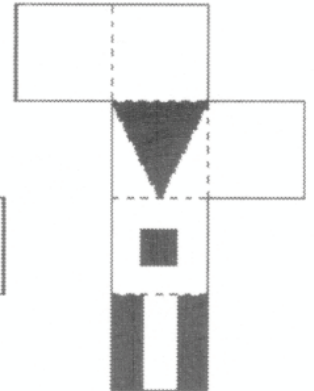
A   B   C   D

Appendix D

Priming Task

Version A: Heritage Prime

Instructions: Complete the word search puzzle by circling each of the 10 words listed below

Word Search A

```
G  W  S  B  Z  X  E  W  M  J  K  L  H  P  K  I  F  L  X  C  J  P  M  O  P
D  N  C  C  A  W  U  O  G  S  Q  A  U  V  X  T  P  U  J  V  J  J  D  W  D
Q  E  F  F  I  C  I  E  N  T  R  H  N  Z  V  F  T  D  I  C  H  S  E  S  B
D  M  F  D  H  P  C  I  S  D  I  G  E  C  G  V  T  N  G  F  B  U  T  V  M
I  O  I  L  T  F  N  J  W  D  S  G  O  M  O  A  F  A  D  C  S  N  A  I  B
S  R  N  S  X  S  N  O  K  S  Z  W  C  Z  X  N  G  S  N  W  E  C  V  J  R
C  Y  J  R  Q  H  R  N  J  T  Q  E  S  S  W  I  S  H  I  R  I  X  I  L  Q
I  D  Y  V  K  K  A  R  I  Q  K  O  D  E  H  S  I  E  A  B  T  N  T  M  N
P  P  F  L  I  E  L  A  N  O  I  T  I  D  A  R  T  P  R  S  K  X  O  O  A
L  F  D  N  I  Z  J  E  P  U  V  K  F  D  I  F  G  L  O  V  M  D  M  A  K
I  R  G  J  K  M  A  W  C  B  O  O  H  C  W  S  G  S  Y  G  A  T  P  D  N
N  Z  X  N  R  W  A  P  S  R  G  E  K  B  E  C  W  H  A  E  M  T  B  T  J
E  Q  D  A  A  U  X  F  R  G  J  U  T  B  C  C  N  T  D  W  P  G  I  R  W
D  Z  R  R  X  Q  H  C  I  Z  G  E  D  U  C  A  T  E  D  N  V  P  B  V  Z
I  N  T  E  L  L  I  G  E  N  T  I  G  P  R  G  L  C  R  W  M  B  P  F  E
```

1. Parents
2. Disciplined
3. Educated
4. Hardworking
5. Family
6. Intelligent
7. Motivated
8. Efficient
9. Traditional
10. Conservative

Version B: Host Prime

Instructions: Complete the word search puzzle by circling each of the 10 words listed below

Word Search B

```
H  N  M  M  N  T  C  I  V  D  W  E  A  R  F  L  A  G  L  N  G  H  M  F  F
J  Y  D  W  C  Z  V  X  F  S  C  O  C  N  M  W  D  Z  A  Y  U  W  I  N  R
O  M  L  P  Z  Z  E  L  Y  N  J  P  N  C  R  I  C  X  R  C  S  T  K  P  E
C  A  H  D  K  Q  B  F  C  S  T  O  W  Z  V  B  U  C  U  R  E  L  M  C  E
E  N  J  A  Z  J  T  I  Q  J  G  L  R  G  M  D  L  V  T  J  D  N  K  F  X
D  Z  J  R  Q  Y  B  D  B  R  U  I  L  S  I  N  M  E  L  C  U  B  W  F  Y
F  J  M  C  Q  V  L  H  I  F  P  T  X  V  G  I  Q  P  U  E  C  C  S  H  W
I  Y  N  X  F  Z  E  W  E  N  X  E  I  A  Q  K  U  U  C  V  A  Y  J  R  Y
L  W  N  G  I  Y  V  C  R  A  F  B  P  C  Z  A  Z  P  I  S  T  A  F  L  H
W  E  G  S  Q  R  A  D  D  V  R  J  X  Q  I  K  O  Q  T  I  E  W  R  B  J
R  K  Y  F  O  E  Y  T  I  N  U  M  M  O  C  Z  P  L  L  N  D  E  V  A  M
S  U  Y  G  P  L  W  L  T  G  V  Z  D  I  L  L  B  A  U  H  R  P  X  D  O
H  E  P  W  K  Y  V  N  N  X  F  I  K  B  H  T  U  H  M  J  H  C  A  X  R
F  H  X  T  I  Z  U  V  G  I  H  M  U  C  M  Q  R  R  P  I  P  W  S  X  J
K  L  R  Q  S  V  K  U  S  H  G  K  M  I  E  G  K  S  V  O  Z  J  L  Q  O
```

1. Multicultural
2. Beloved in foreign countries
3. Polite
4. Free
5. Peaceful
6. Kind
7. Equality
8. Community
9. Wear flag
10. Educated

65

Appendix E

Dependent Variable Measure

Singelis 1994 – Independence/Interdependence

Instructions: Please mark the number on the scale that corresponds to your answer.

Interdependence items:	Strongly disagree						Strongly Agree
1. I have respect for the authority figures with whom I interact	1	2	3	4	5	6	7
2. It is important for me to maintain harmony within my group	1	2	3	4	5	6	7
3. My happiness depends on the happiness of those around me	1	2	3	4	5	6	7
4. I would offer my seat in a bus to my professor	1	2	3	4	5	6	7
5. I respect people who are modest about themselves	1	2	3	4	5	6	7
6. I will sacrifice my self-interest for the benefit of the group I am in	1	2	3	4	5	6	7
7. I often have the feeling that my relationships with others are more important than my own accomplishments	1	2	3	4	5	6	7
8. I should take into consideration my parents' advice when making education/career plans	1	2	3	4	5	6	7
9. It is important to me to respect decisions made by the group	1	2	3	4	5	6	7
10. I will stay in a group if they need me, even when I'm not happy with the group	1	2	3	4	5	6	7
11. If my brother or sister fails, I feel responsible	1	2	3	4	5	6	7
12. Even when I strongly disagree with group members, I avoid an argument	1	2	3	4	5	6	7
Independent Items:							
13. I'd rather say "No" directly, than risk being misunderstood	1	2	3	4	5	6	7
14. Speaking up during a class is not a problem for me	1	2	3	4	5	6	7
15. Having a lively imagination is important to me	1	2	3	4	5	6	7
16. I am comfortable with being singled out for praise or reward	1	2	3	4	5	6	7
17. I am the same person at home as I am at school	1	2	3	4	5	6	7

18. Being able to take care of myself is a primary concern for me	1	2	3	4	5	6	7
19. I act the same way no matter who I am with	1	2	3	4	5	6	7
20. I feel comfortable using someone's first name soon after I meet them, even when they are much older than I am	1	2	3	4	5	6	7
21. I prefer to be direct and forthright when dealing with people I've just met	1	2	3	4	5	6	7
22. I enjoy being unique and different from others in many respects	1	2	3	4	5	6	7
23. My personal identity independent of others, is very important to me	1	2	3	4	5	6	7
24. I value being in good health above everything	1	2	3	4	5	6	7

Appendix F

Demographic Questionnaire

Age: _____

What is your gender: _____

Were you born in Canada?   Yes   No

       If *No*: How old were you when you came to Canada? _____

       If *No*: Where were you born? _____

Are you a *child* or *grandchild* of an immigrant or refugee to Canada?   Yes   No

In which country was your mother born? _____

In which country was your father born? _____

People also describe themselves in terms of their cultural or ethnic group (e.g., Bengali, Jamaican, Taiwanese etc.).

How would you describe your cultural/ethnic group?
_____

What language(s) do you speak?
_____

Appendix G

Priming Adjective List

Instructions: For each of the following adjectives, please think how well each adjective describes Canadian[*] culture, and rate it from 1 (not at all like) to 5 (extremely like). Then, rate each word on how positive it is on a scale from 1 (not at all positive) to 5 (very positive). Then, rate each word on how negative it is on a scale from 1 (not at all negative) to 5 (very negative). Finally, add any adjectives you think describe Canadian culture.

	Adjective/Characteristic	**How Canadian**	**How positive**	**How negative**
	Example: cold	3	1	4
1	Accepting one's position			
2	Afraid to express controversial opinions			
3	Aggressive			
4	Ambitious			
5	Anti-American			
6	Arrogant			
7	Artistic			
8	Assists the less fortunate			
9	Autonomous			
10	Beloved in foreign countries			
11	Brave			
12	Benevolent authority			
13	Boastful			
14	Boring			
15	Callous			
16	Careful			
17	Casual			
18	Cheerful			
19	Cohesive			
20	Competitive			
21	Conceited			
22	Conservative			
23	Conventional			
24	Courteous			
25	Cruel			
26	Culturally superior			
27	Daring			
	Adjective/Characteristic	**How Canadian**	**How positive**	**How negative**
28	Deceitful			

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[*] Participants rated the full list for Canadian, South Asian and East Asian cultures

29	Dirty			
30	Disciplined			
31	Don't promote themselves			
32	Educated			
33	Efficient			
34	Enjoying life			
35	Entrepreneurial			
36	Ethical			
37	Exploitative			
38	Family-oriented			
39	Fragmented			
40	Free			
41	Genuine			
42	Greedy			
43	Hardworking			
44	Harmonious			
45	Having an exciting life			
46	Having few desires			
47	Honest			
48	Honouring parents and elders			
49	Humble			
50	Humourless			
51	Ignorant			
52	Inclusive			
53	Independent			
54	Industrious			
55	Intelligent			
56	Kind			
57	Knowledgeable			
58	Lacking a strong sense of national unity			
59	Land of opportunity			
60	Law-abiding			
61	Lazy			
62	Loyal			
63	Materialistic			
64	Meditative			
	Adjective/Characteristic	**How Canadian**	**How positive**	**How negative**
65	Moderator			
66	Modest			
67	Motivated			
68	Multicultural			
69	Nationalistic			
70	Nervous			
71	Obsessed with the weather			

	Adjective/Characteristic			
72	Orderly			
73	Organized			
74	Passive			
75	Patient			
76	Patriotic			
77	Peaceful			
78	Persistent			
79	Pleasure-loving			
80	Polite			
81	Practical			
82	Preserving one's public image			
83	Progressive			
84	Protecting own "face"			
85	Protecting the environment			
86	Quiet			
87	Reciprocating favours			
88	Religious			
89	Reserved			
90	Resistant to temptation			
91	Resourceful			
92	Respectful			
93	Responsible			
94	Revengeful			
95	Righteous			
96	Rugged			
97	Scientifically-minded			
98	Self-confident			
99	Self-reliant			
100	Selfish			
101	Shameful			
	Adjective/Characteristic	**How Canadian**	**How positive**	**How negative**
102	Sheltered			
103	Sincere			
104	Sly			
105	Socialist			
106	Social welfare			
107	Sportsmanlike			
108	Steady			
109	Straightforward			
110	Strange			
111	Stubborn			
112	Stuffy			
113	Subdued patriotism			
114	Successful			

115	Superstitious			
116	Thrifty			
117	Tolerant			
118	Traditional			
119	Tricky			
120	Trusting and uncritical of authority figures			
121	Trustworthy			
122	Unknown by foreign countries			
123	Uptight			
124	Valuing belongingness			
125	Valuing community			
126	Valuing equality			
127	Valuing order			
128	Valuing status			
129	Virility			
130	Wealthy			
131	Wear their flags outside their country			
132	Wilderness/returning to nature			

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