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## The Impact of Intolerance of Uncertainty on International Students' Intercultural and Intracultural Conflict Management

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The Impact of Intolerance of Uncertainty on International Students' Intercultural and  
Intracultural Conflict Management

The Impact of Intolerance of Uncertainty on International Students' Intercultural and  
Intracultural Conflict Management

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Arts in Communication

by

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This thesis is approved for recommendation to the Graduate Council.

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## **ABSTRACT**

This study investigates the role of intolerance of uncertainty in international students' conflict management in intracultural and intercultural settings. International students at a large U.S. university were surveyed and their responses were analyzed using quantitative methods. Analyses indicated that the higher the intolerance of uncertainty scores, the higher the use of dominating and avoiding strategies. The results in this study also revealed that when controlling for sex, the higher the individuals' intolerance of uncertainty score, the lower their preference for integrating-compromising strategy. Finally, there were limited differences between the ways international students handle conflict with conflict partners from their own culture versus representatives of a foreign culture.

*Keywords:* intercultural communication, conflict, intolerance of uncertainty

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## Chapter One

As the modern world is getting more interdependent, intercultural communication has become an increasingly important aspect of people's lives. Communication between individuals from multiple cultures occurs at school and in work settings, as well as in intimate relationships. One particularly interesting setting for intercultural communication is the world of academia. According to the recent report on global education trends released by the Institute of International Education, a Washington, D.C.-based nonprofit organization, the number of international students in the U.S. increased 7.2%, to 819, 644 students in 2012-2013 (*Open Doors*, 2013). International students come to study in the U.S. from multiple regions including Asia, Europe, Middle East and North Africa, Latin America and the Caribbean, Sub-Saharan Africa, North America, as well as Oceania (*Open Doors*, 2013). In 2012 alone, the presence of all these international students in the U.S. generated about \$24.7 billion (*Open Doors*, 2013). But revenue is not the only benefit of hosting international students. Students coming to study in the U.S. share their cultures with Americans, contributing to cultural exchange, building bridges between countries, and facilitating mutual understanding between the nations. Cultural differences between such foreign students and host country representatives have a profound impact on daily interactions and communication between them.

This study investigates the impact of cultural differences on intercultural communication. More specifically, the present study considers the influence of cultural differences on the way international students manage interpersonal conflict in their daily lives and explores possible differences between the ways international students manage conflict with someone from their own culture versus an individual from a U.S. culture. The conceptualization of cultural differences in this study is based on the cultural dimension of intolerance of uncertainty.

In Chapter Two, relevant academic literature on major theories in the field of intercultural communication and cultural distance is outlined. Possible behavioral differences in handling intercultural and intracultural conflicts also are described. In addition, the purpose of the study and research questions are presented. Chapter Three presents the methodology for this study, including descriptions of the sample, instruments, pre-test, and procedures. Chapter Four reports the results of preliminary and primary analyses for each of the research questions and describes statistical tests used in the study. In particular, analysis indicates that the higher the intolerance of uncertainty scores, the higher the use of dominating and avoiding strategies. The results also reveal, that when controlling for sex, the higher the participants' intolerance of uncertainty score, the lower their preference for integrating-compromising strategy. Furthermore, in an academic scenario, limited differences emerge between the ways international students manage conflict with partners from their own culture versus representatives of U.S. culture. In fact, the only difference to emerge was participants' tendency to employ integrating-compromising strategies with cultural fellows versus U.S. individuals. Lastly, Chapter Five offers interpretations of the results. Possible limitations and suggestions for future research are provided with final conclusions.

## Chapter Two

### LITERATURE REVIEW

The origins of the academic discipline of intercultural communication date to the end of the World War II. After the War, the United States and other countries became concerned with preservation of the world peace and advancement of mutual understanding between the nations. The U.S. emerged as one of the major world powers, whose diplomatic corps, however, often lacked knowledge and language skills of their assigned countries (Rogers, Hart, & Miike, 2002). In 1946, U.S. government established the Foreign Service Institute to provide intercultural training for U.S. diplomats and development workers. The course content drew on a variety of disciplines such as cultural anthropology, linguistics, and psychology, and included language instruction, lectures about cultural differences, as well as non-verbal communication training. By 1970 intercultural communication attracted attention from scholars in multiple nations (Rogers, Hart, & Miike). Their scholarship led to the development of seminal theories of intercultural communication that are summarized below.

#### **Hofstede's Cultural Dimensions Theory**

According to Dutch organizational studies scholar Hofstede, *culture* is a collective phenomenon of patterns of thinking, feeling, and potential action learned across the lifetime from the social environment (Hofstede & Hofstede, 2005). Differences in these patterns distinguish members of one group or category of people from other categories (Hofstede & Hofstede). Most of these patterns of thinking, feeling, and acting are learned in the early childhood. Interpersonal communication serves as one of the transmission channels by which people share and learn culture through social interaction in addition to learning culture through media channels (Ananthanarayanan & St. Clair, 2012).

Cultural differences arise and are manifest on several levels. First, they become evident on the level of *symbols*, defined as words, gestures, pictures, and objects carrying a particular meaning and recognized by the people sharing a certain culture (Hofstede & Hofstede, 2005). Next, cultural differences reveal themselves in *heroes*, or models of behavior, who possess characteristics that are highly valued in a culture (Hofstede & Hofstede). The next facet of cultural differences is *rituals* carried out in different cultures. They are collective activities that are considered as socially essential within a certain culture (Hofstede & Hofstede). Together *rituals*, *heroes*, and *symbols* comprise *cultural practices* that are visible to an outside observer, but often remain unconscious to those employing and enacting them (Hofstede & Hofstede).

According to Hofstede and Hofstede (2005), cultural differences can be understood along cultural dimensions, or aspects of a culture that can be measured relative to other cultures. Forming together a four-dimensional model of cultural differences, Hofstede distinguished the following four dialectical dimensions of cultural variability: individualism-collectivism, masculinity-femininity, low-high uncertainty avoidance, and low-high power distance. Varying across cultures both on individual and national levels, these four dimensions influence interpersonal communication processes (Gudykunst, Lee, Nishida, & Ogawa, 2005). Below are brief descriptions of the four cultural dimensions.

**Power distance.** This dimension deals with “the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally” (Hofstede & Hofstede, 2005, p. 41). Social dominance, or an individual’s preference for hierarchy within a social system versus egalitarianism, or individual’s preference for equality, are the individual level dimensions used to measure cultural power distance at the individual level (Gudykunst, Lee, Nishida, & Ogawa, 2005).

**Individualism versus collectivism.** According to Hofstede and Hofstede (2005), while individualism is characteristic of societies “in which the ties between individuals are loose (everyone is expected to look after themselves and their immediate family)” (p. 76), collectivism refers to societies “in which people from birth onward are integrated into strong, cohesive in-groups, which throughout people's lifetimes continue to protect them in exchange for unquestioning loyalty” (p. 76). There are three mediating characteristics of individuals that impact the influence of individualism-collectivism on communication: individual personalities, individual values, and self-construals (Gudykunst, Lee, Nishida, & Ogawa, 2005). The term “self-construal” refers to the ways members of cultures conceive of themselves and manifest themselves on two different levels: independent and interdependent (Gudykunst & Lee, 2002). The independent self-construal views the self as a unique, independent entity and is predominant in individualist cultures, while interdependent self-construal refers to seeing the self as part of social relationship that guides individual's behavior and is predominant in collectivist cultures (Gudykunst & Lee).

**Femininity versus masculinity.** According to Jian, Pettey, Rudd, and Lawson (2007), femininity and masculinity are gender role patterns, which usually extend from biological sex differences, and are socially constructed through communication behaviors. Masculinity has a strong association with traditional male roles that present themselves in ambition and desire for advancement in position and status, whereas femininity is associated with female roles that are associated with nurturance and relationship development (Jian, Pettey, Rudd, & Lawson). A society is considered masculine “when emotional gender roles are clearly distinct: men are supposed to be assertive, tough, and focused on material success, whereas women are supposed to be more modest, tender, and concerned with the quality of life” (p. 120). Feminine society, in

turn, is characterized by overlapping emotional gender roles, where “both men and women are expected to be modest, tender, and concerned with quality of life” (Hofstede & Hofstede, 2005, p. 120). Gender is the primary individual-level factor mediating the influence of this cultural dimension on communication (Gudykunst, Lee, Nishida, & Ogawa, 2005).

**Uncertainty avoidance.** Uncertainty avoidance is defined as “the extent to which the members of a culture feel threatened by ambiguous or unknown situations” (Hofstede & Hofstede, 2005). Like the previous three cultural dimensions, uncertainty avoidance is learned and reinforced through institutions like family, school, and government. Uncertainty avoidance should not be confused with risk avoidance because rather than leading to risk reduction, uncertainty avoidance usually leads to ambiguity reduction (Hofstede & Hofstede). High uncertainty-avoidance societies are characterized by high stress and anxiety levels. People from such societies tend to avoid ambiguous situations (Hofstede & Hofstede). People from low uncertainty-avoidance societies, in turn, show low levels of stress and anxiety, express their emotions and aggression more freely, and feel more comfortable in ambiguous situations (Hofstede & Hofstede). On a state level, high uncertainty-avoidance countries tend to be more conservative and favor law and order, whereas low uncertainty-avoidance societies tend to be more liberal. Tolerance for ambiguity and uncertainty are two individual-level factors mediating the influence of cultural uncertainty avoidance on communication (Gudykunst, Lee, Nishida, & Ogawa, 2005).

Hofstede carried out his initial research of the four cultural dimensions in 1970, and his cultural dimensions theory remains relevant today. Correlations between the scores obtained then and the scores obtained in replication studies today do not become weaker over time (Hofstede & Hofstede, 2005). Multiple later intercultural communication theories were influenced and

inspired by Hofstede's cultural dimensions theory (Gudykunst, Lee, Nishida, & Ogawa, 2005). Such theories include anxiety/uncertainty management, face-negotiation, and expectancy violation theories as discussed below.

### **Anxiety/Uncertainty Management Theory**

While Hofstede's theory of cultural dimensions looks at cultural differences on the level of analysis of entire societies, Gudykunst's anxiety/uncertainty management theory (AUM) applies these dimensions at a more individual level of analysis. In particular, the AUM theory addresses the ways people from different cultures deal with uncertainty and ambiguity. The AUM's theoretical assumptions are outlined below.

**Uncertainty.** Uncertainty is a cognitive phenomenon that affects the way people form their opinions about strangers (Gudykunst, 2005). Both predictive and explanatory in nature, uncertainty is the inability to predict others' attitudes or behaviors and to come up with a coherent explanation for unfamiliar behaviors (Ting-Toomey, 2009). Individuals experience more uncertainty when they communicate with members of out-groups than with in-group members (Gudykunst).

Individuals have varying thresholds for uncertainty across cultures and individuals (Ni & Wang, 2011). The maximum threshold is the highest level of uncertainty individuals can have and still perceive that they are able to accurately predict strangers' behavior and still feel comfortable interacting with them. The minimum threshold refers to the lowest level of uncertainty that does not let individuals get unmotivated or overconfident in their predictions of others' behaviors.

**Anxiety.** Anxiety is an emotional outcome of uncertainty that manifests itself in feelings of uneasiness, awkwardness, confusion, stress, worry, or apprehensiveness about the encounter

(Ting-Toomey, 2009). Individuals get anxious when they are unable to create a positive impression in their interactions (Gudykunst, 2005). Anxiety tends to be higher in more uncertain intergroup communication than in interpersonal communication because individuals do not want others to perceive them as prejudiced or incompetent (Gudykunst).

There are minimum and maximum thresholds for anxiety. The maximum threshold is the maximum level of anxiety individuals can tolerate when interacting with cultural strangers. When anxiety level is very high, individuals tend to communicate on autopilot interpreting strangers' behaviors through their own cultural frames and stereotypes or avoid interaction altogether. Alternatively, when the emotional anxiety is very low, individuals tend to enact ethnocentric behaviors and not care about functioning effectively in the interactions (Ni & Wang, 2011).

**Mindfulness.** The concept of mindfulness is derived from social psychology research and defined as “being open to new information and multiple cultural perspectives, creating core differentiated categories to understand cultural strangers' viewpoints, and being sensitive to the complex process of meaning negotiation between different identity groups” (Ting-Toomey, 2009). Gudykunst argued that uncertainty/anxiety management and mindfulness are the basic causes of effective communication (Gudykunst, Lee, Nishida, and Ogawa, 2005).

There are several axioms in AUM that address Hofstede's cultural dimensions:

- An increase in cultural collectivism leads to increased anxiety and uncertainty experienced by in-group members when they interact with cultural strangers. It also leads to an increase in in-group member's use of group-based and situation-based information to manage uncertainty with strangers, as well as an increase in the focus on maintaining good relations between communicators to communicate effectively.

- An increase in cultural uncertainty avoidance leads to an increase of uncertainty and anxiety experienced when interacting with strangers from other cultures, races, and ethnic or age group, especially if there are no clear rules for stranger-in-group interactions.
- Low status members of low power-distance cultures will have greater anxiety and uncertainty when communicating with high status members of their culture.
- Lastly, an increase in cultural masculinity will produce an increase in the sharpness of the stranger-in-group distinction in the opposite sex-relationships.

### **Face-Negotiation Theory**

Originally developed as a conflict management theory, face-negotiation theory (FNT) has been extended by its author Ting-Toomey to integrate cultural level dimensions to explain face concerns and facework behaviors, as well as interpersonal conflict management styles (Gudykunst, 2005). The basic premise of the theory is that “conflict is a face-negotiation process whereby individuals engaged in conflict have their situated identities or faces threatened or questioned” (Gudykunst, p. 9). Face is defined as “a claimed sense of favorable social self-worth that a person wants others to have of her or him” (Gudykunst, p. 9). There are three dimensions of face: self-face, or concern for self-image, other-face, or concern for another’s image, and mutual-face, or concern for both parties’ images (Ting-Toomey & Oetzel, 2002). Cultural dimensions impact the choice of face-saving strategies used by individuals. Members of collectivist cultures tend to use other-oriented face-saving strategies; members of individualist cultures prefer self-oriented face-saving strategies (Gudykunst). According to Gudykunst, low power-distance cultures tend to “defend and assert their personal rights” (p. 10); high power-distance cultures tend to “perform their ascribed duties responsibly” (p. 10). Thus, high-status members of high power-distance cultures rely on verbally indirect facework strategies, while

high-status members of low power-distance cultures prefer verbally direct strategies (Gudykunst).

### **Expectancy Violation Theory**

Expectancy violation theory (EVT) attempts to explain interpersonal communication through the prism of expectations held by individuals and their responses to expectation violations (Gudykunst, 2005). Based on social norms and rules, as well as individual differences, expectancies cause either positive or negative responses when violated (Gudykunst). Cultural dimensions have an impact on each culture's expectancies. For example, members of collectivist cultures may expect greater verbal indirectness, politeness, and non-immediacy than members of individualist cultures (Gudykunst). Low uncertainty avoidance impacts tolerance of deviant behavior: members of low uncertainty cultures tend to be more tolerant of expectancy violations than high uncertainty-avoidance cultures (Gudykunst). Power distance impacts interpretations of status violations (Gudykunst). For example, if a high-status member of a high power-distance culture violates an expectation of his/her lower status member, this would inevitably increase stress and anxiety (Gudykunst).

Concern for cultural differences conceptualized along Hofstede's cultural dimensions and their influence on various aspects of interpersonal communication across cultures are evident on theoretical level. Such concern also is evident in the research carried out in the field of intercultural communication.

To date, individualism/collectivism has been the most widely researched of Hofstede's dimensions and the most confirmed in replications (Hofstede & Hofstede, 2005). This dimension has been used with a variety of populations to investigate a variety of topics:

- Conflict experiences in student populations (Ohbuchi, Fukushima, & Tedeschi, 1999; Shupe, 2007; Trubitsky, Ting-Toomey, & Lin, 1991; Cingoz-Ulu & Lalonde, 2007), in organizational setting (Smith, Dugan, Peterson, & Leung, 1998; Elsayed-Ekhouly & Buda, 1996; Ohbuchi & Takahashi, 1994), and among Chinese expatriates in the U.S. (Sun & Starosta, 2001);
- Differences in mediation techniques between individualist and collectivism mediators (Lee, 2002);
- Corporate behavior and business ethics (Zhang, Liang, & Sun, 2013; Finkelstein, 2012);
- Consumer behavior (Nayeem, 2012a; Nayeem, 2012b);
- Cultural differences in the use of Web 1.0 and Web 2.0 by Chinese and American youth (Wei, Willnat, & Shao, 2012); and
- Leadership communication in cross-cultural samples (Torres & Bligh, 2012).

Another well-researched cultural dimension is uncertainty avoidance. It has been studied in the following areas:

- Consumer behavior (Shah, 2012; Broderick, 2007; Kailani & Kumar, 2011) and product perceptions (Lee, Garbarino, & Lerman, 2007);
- Cross-cultural tourism behavior (Litvin, Crotts, & Hefner, 2004);
- International advertising in Western Europe (Hoeken, van den Brandt, Crijns, Dominguez, Hendriks, Planken, & Starren, 2003);
- Scarcity effects across cultures (Jung & Kellaris, 2004); and
- International ethics research (Davis, Bernardi, & Bosco, 2013).

Studies of other cultural dimensions include:

- Cross-cultural variability in ethical sensitivity to stakeholder interests among U.S. And Taiwanese sales agents (Blodgett, Lu, Rose, & Vitell, 2001);

- Masculinity/femininity and compliance-gaining in business negotiations (Jian, Pettey, Rudd, & Lawson, 2007);
- National culture and industrial buyer-seller relationships in the United States and Latin America (Hewett, Money, & Sharma, 2006);
- Cultural dimensions as predictors of cross-national differences in medical communication (Meeuwesen, van den Brink-Muinen, & Hofstede, 2009);
- Cultural differences in collaborative authorship of Wikipedia (Pfeil, Zaphiris, & Ang, 2006);
- Business advertising appeals and cultural differences across 11 countries (Albers-Miller & Gelb, 1996); and
- Effects of cultural femininity on preference for methods of conflict processing (Leung, Bond, Carment, Krishnan, & Liebrand, 1990).

Finally, Hofstede's cultural dimensions received attention from the non-scholarly community. They are often discussed extensively online as illustrated by the quotations listed below:

A few years ago I was involved in a study where we asked managers to report on what they found most difficult to deal with at work and in their relationships. It was no surprise that what they found hardest to tackle was interpersonal conflict.... Nobody likes dealing with difficult relationships and we assumed that this was because they were afraid or embarrassed. But what managers actually felt was uncertainty about what to say and how to say it.... This is what psychologists call the capacity to deal with uncertainty. We each respond to uncertainty (ambiguity) in information and behavior differently....

Unsurprisingly then, the greater a person's tolerance for ambiguity the better they tend to do in many workplace situations. This is particularly important for managers, but useful for us all to remember in our own personal development (Winbolt, 2010).

Cultural differences are amplified when individuals are faced with difficult situations. Interpersonal conflict is one such case. According to Ting-Toomey and Oetzel (2001), "when people from different cultures engage in conflict, they often have different expectations of how the conflict should be handled" (p. 1). The values and norms of culture frame conflict expectations (Ting-Toomey & Oetzel). The present study is an attempt to investigate how cultural differences along intolerance of uncertainty dimension impact interpersonal conflict management. In particular, the study explores the role that the cultural dimension of intolerance of uncertainty plays in individuals' preferred use of conflict management strategies.

### **Conflict Strategies**

Donohue and Kolt (1992) defined interpersonal conflict as "a situation in which interdependent people express (manifest or latent) differences in satisfying their individual needs and interests, and they experience interference from each other in accomplishing these goals" (p. 4).

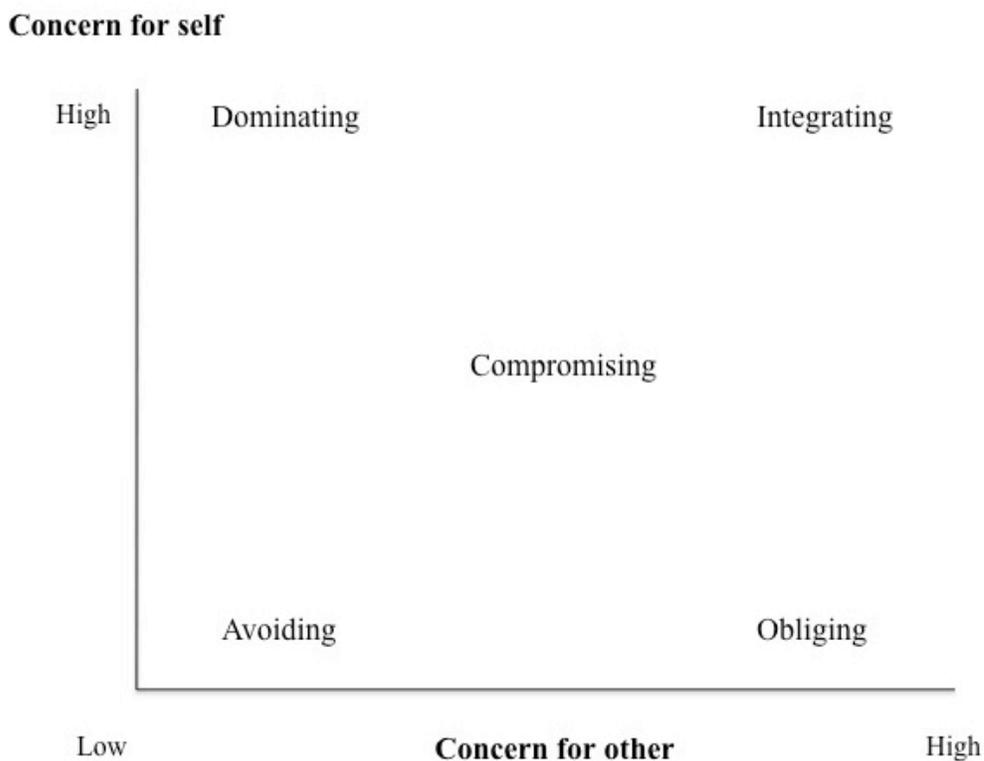
Different interpersonal conflict models propose a variety of conflict management strategies. One of the frequently cited models was developed by Blake and Mouton and refined by Kilmann and Thomas (Kozan, 1991). According to Kilmann and Thomas (1977), the five strategies for managing conflict are integrating, compromising, avoiding, obliging, and dominating. These strategies for managing conflict can be conceptualized along the dialectic of "concern for self" and "concern for other" dimensions (Kozan). According to Kozan, while the former represents "the degree (high or low) to which a person attempts to satisfy personal

concerns” (p. 86), and the latter refers to “the degree (high or low) to which that person attempts to satisfy others’ concerns” (p. 86). On the next page, Figure 1 illustrates the two-dimensional model of conflict management strategies.

*Integrating strategy* is characterized as both assertive and cooperative (Bobot, 2010). It is often called a “win-win, as it generally leads to a solution that is a genuine integration of the desires of both sides to win” (Bobot, p. 296). Individuals using this strategy face the conflict and attempt open discussion of all relevant issues and concerns (Kozan, 1991).

*Compromising strategy* is marked by a smaller level of assertiveness and cooperation (Bobot, 2010). Its goal is finding a “quick, mutually agreeable solution that partially satisfies

**Figure 1. A Two-Dimensional Model of interpersonal Conflict Management Strategies**



everybody” (Bobot, p. 296). Compromising strategy is often referred to as finding “the middle ground” (Bobot, p. 296).

*Avoiding strategy* is characterized by unassertive and uncooperative behavior (Bobot, 2010). Individuals using this strategy do not pursue their own concerns or those of the other person. They often attempt to sidestep the issue, postpone discussing it, or simply withdraw from a difficult situation; this strategy does not address or eliminate the conflict itself (Bobot).

*Obliging strategy* is unassertive and cooperative (Bobot, 2010). The obliging individual tends to neglect their own concerns to satisfy the other party's wishes (Bobot). This strategy is sometimes referred to as accommodating or "selfless generosity, obeying another person's order, or yielding to another's point of view" (Bobot, p. 296).

Lastly, *the dominating strategy* is assertive and uncooperative (Bobot, 2010). Dominating individuals employ competitive behaviors and use of power to "win" the conflict, often ignoring the other's concerns (Kozan, 1991). According to Bobot, dominating strategy is often referred to as a "win-lose strategy" (p. 296).

The choice of conflict strategies is not mutually exclusive. As quoted by Bobot (2010), Thomas and Kilmann wrote:

Each of us is capable of using all five conflict-handling modes; none of us can be characterized as having a single, rigid style of dealing with conflict. However, any given individual uses some modes better than others and therefore tends to rely upon those modes more heavily than others, whether because of temperament or practice (p. 296).

### **Intracultural versus Intercultural Encounters**

An intercultural setting provides a milieu for amplifying cultural differences, which can lead to conflict based on a clash of world views. According to Yum's theory of intracultural versus intercultural networks, there is more variance in behavior between cultures than within cultures (Gudykunst, Lee, Nishida, & Ogawa, 2005). Hence, individuals' preferred use of

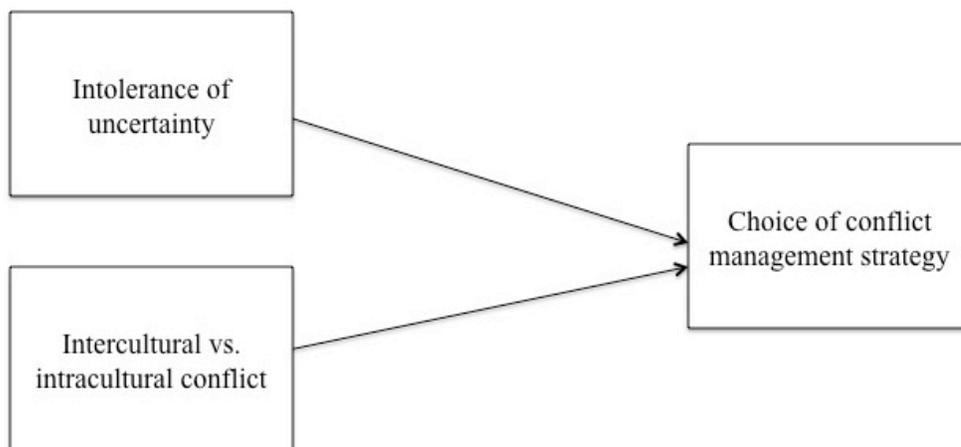
conflict strategies with their in-group members might be different from the preferred use of strategies with out-group members. For example, a study of U.S. and Korean populations documented that Koreans' intracultural compromise and collaboration styles (their cooperative tendency) in managing intracultural conflict was likely to decrease in managing intercultural conflict (Hong, 2004), U.S. Americans competition style and assertive tendencies in managing intracultural conflict also were likely to decrease in intercultural conflict (Hong). It seems reasonable, then, to examine whether the preferred use of conflict strategies within cultures and across cultures varies across populations with high/low intolerance of uncertainty in both intracultural and intercultural conflicts.

To this end, the following research questions were proposed:

RQ1: What is the relationship between individuals' intolerance of uncertainty level and their preferred use of conflict management strategies?

RQ2: Are there differences between individuals' preferred use of conflict management strategies in intercultural versus intracultural conflict situations?

Here, the research questions are depicted in a model:



**Figure 2. Model of Intercultural/Intracultural Conflict Management**

## **Chapter Three**

### **METHODOLOGY**

#### **Sample**

International students at the University of Arkansas served as participants in this study. International students present a particularly interesting population to study because individuals sojourning in a foreign country are often faced with uncertainty and potential misunderstandings while interacting with members of the host culture. Such uncertainties and misunderstandings may lead to conflict. Simultaneously, international students often form support groups consisting of students from their own countries providing each other social support and aiding adaptation to a new culture.

The sample contained 179 international students, attending the University of Arkansas, including 50 men (42%) and 70 women (58%). The participants' ages ranged from 17-53, with a mean of 26 years. The participants hailed from 48 countries on 6 continents and reported speaking 32 native and 26 foreign languages. Participants were enrolled in a variety of academic programs: 43 in undergraduate programs, 40 in Master's level graduate program, 38 in PhD program, and 1 in Other. The duration of stay in the U.S. ranged from 2 months to 21 years, while the number of trips abroad ranged from 1 to 70. Although the sample is highly diverse in terms of demographic characteristics, the international students' sample in this study may be fairly homogenous in terms of resources available to the students in their home countries. Many of students choosing to study abroad typically come from upper-class families and solid educational backgrounds, as well as adequate English language training. Moreover, students who self-select to study abroad may be more adventurous and out-going than the average citizen from their country and thus may have higher tolerance for uncertainty. However, as results of this

study show, international students still struggle with the issues related to cultural differences and interpersonal conflict.

## **Procedures**

The international students were recruited via an email sent out to the University of Arkansas International Students and Scholars Office roster of international students. The email invited participation and contained a link to an online survey webpage. In the email, students were informed about the opportunity to enter a lottery to win a \$25 Visa gift card after completing the survey. After students clicked the link, they were redirected to an online survey webpage.

The first page the participants saw on this webpage was the Informed Consent form. After reading the Informed Consent form and agreeing to participate in the study, the students proceeded to the survey. There was a total of three questionnaires in the survey: a questionnaire measuring intolerance of uncertainty, a questionnaire measuring preferred use of conflict management strategies in both intercultural and intracultural conflicts, and a demographics section. The order of the first two questionnaires was randomized to minimize the order effects. The demographics section for the survey always appeared last as it was assumed that test fatigue would have the least influence on the provision of factual information.

For the conflict management scale, participants entered their responses to a hypothetical conflict scenario for each item twice – once for a hypothetical conflict scenario with a fellow student from the U.S. and once for a conflict with a fellow student from their native country. There may have been contrast effects associated with this approach to measuring preferred use of conflict management strategies. The term “contrast effects” in this case refers to exaggeration or enhancement in perception of differences by participants as a result of exposure to a hypothetical

conflict scenario with both conflict partners simultaneously. However, the results yielded very few significant differences between intercultural and intracultural conflict management.

The U.S. was chosen as one of the conflict partner's country of origin to minimize ambiguity when thinking about a conflict with a peer from a foreign country. Even though there are home country differences associated with each international student's respective country, the aim of this study was to compare intracultural and intercultural conflict management as conceptualized along varying intolerance of uncertainty scores that are not tied up to particular countries, but rather tied to individuals.

### **Instruments**

**Conflict scenarios.** The researcher developed an instrument designed to identify the preferred use of interpersonal conflict management strategies international students might use when in conflict situations with fellow students from the U.S. versus their native countries. The instrument consists of two parts: first, the participants read a hypothetical conflict scenario that depicted a typical interpersonal conflict situation that college students may experience. Then, participants answer a series of questions by rating how characteristic each of the items was of them in that conflict situation with each of the conflict partners – one a fellow student from their native culture and the other with a fellow student from the U.S.

Hypothetical conflict scenarios were employed to reduce participants' ambiguity when reflecting upon conflict situations with students. This approach allowed the international students to respond to an actual situation that they might have experienced while studying in the U.S. The scenario used for this study was adopted from Neuliep and Speten's 2007 study of conflict management by international students and modified to suit the goals of this study.

The scenario approach has been used in previous conflict research with student populations to study a variety of phenomena, including conflict resolution strategies in U.S. and Taiwanese college students in academic contexts (Huang, 2009); conflict resolution behaviors demonstrated by a sample of occupational therapy students (Landa-Gonzalez, 2005); the influence of ethnocentrism on face, facework, and conflict styles during intercultural conflict (Neuliep & Speten, 2007); as well as the influence of contextual factors on the choice of conflict management strategies by college students (Callanan, Benzing, & Perri, 2006).

The scenario approach also has been employed in conflict research in organizational settings to study a wide variety of phenomena including the effects of formal and informal relations on choice of interpersonal conflict resolution strategy in organizational settings (Ahose, 1995); women's conflict management strategies in situations of sexual harassment (Lancaster, 1986), and nurses' conflict management techniques with physicians in emergency rooms (Keenan, 1994).

**Rahim Organizational Conflict Inventory II.** Rahim Organizational Conflict Inventory II (ROCI-II) is a self-report tool used to measure the preferred use of conflict management strategies in organizational settings (Rahim, 1983). The scale consists of 28 items that were designed to identify the use of the four conflict management strategies (integrating-compromising, obliging, avoiding, and dominating). Typical items include "I try to integrate my ideas with my peers to come up with a decision jointly," "I use 'give and take' so that a compromise can be made," and "I try to keep my disagreement to myself to avoid hard feelings." Participants rated each item on 5-point Likert scale with responses ranging from "Untrue of me" to "True of me".

On average, the ROCI-II scale's reliability in studies of interpersonal conflict in organizations varied from .70 to .89 for all five conflict styles (Kozan, 1991; Bippus & Rollin, 2003; Bobot, 2010) and compared "quite favorably with those of existing instruments on modes of handling interpersonal conflict" (Rahim, 2001, p. 82).

The ROCI-II also has been employed beyond organizational settings. Hammock, Richardson, Pilkington, and Utley (1990) used the scale in three samples to assess conflict management with family members (parent and sibling), a superior (professor), peer (friend), and a "generalized other," yielding Cronbach alpha coefficients that ranged from 0.73 to 0.92, indicating high internal consistency among the items composing each scale.

The ROCI-II scale has been widely used by scholars from various disciplines including social psychology, sociology, counseling, human resources, business ethics, as well as communication to study conflict in organizations and social relationships.

In the area of interpersonal communication, ROCI-II has been employed with a variety of populations:

- In organizational settings, the scale has been employed to investigate the relationship between organizational status, gender role, and conflict management styles of male and female employees (Brewer, Mitchell, & Weber, 2002); the effect of type of conflict, conflict management strategy, and the quality of subsequent relationship in buyer-seller relations (Bobot, 2010); the primary and secondary conflict management style preferences of men and women in the role of local managers, international managers, and college students in Thailand (Sirivun, 2001); conflict handling styles in conflicts caused by ethical dilemmas among academic personnel in Turkey (Alakavuklar & Cakar, 2012); differences in conflict handling styles among employees of private and public companies in Hong-Kong (Brewer & Lam, 2009), as well as the

relationship between referent role and conflict handling styles among U.S. executives (Rahim, 2001).

- In non-organizational settings, ROCI-II has been used to study attachment style differences in relational maintenance and conflict behaviors in friends' perceptions (Bippus & Rollin, 2003); family communication patterns and the conflict styles young adults use with their fathers (Dumlao & Botta, 2000); the role of horizontal and vertical individualism and collectivism in choice of conflict resolution strategies among college students (Komarraju, Dollinger, & Lovell, 2008), student nurses' conflict management styles in a nursing school in Turkey (Kantek & Gezer, 2009), as well as the relationships between the conflict management styles of terminated pastors and selected contextual factors (Works, 2008).

ROCI-II has been widely used by social scientists in the area of cross-cultural communication. Foci of such previous studies included comparative analysis of conflict styles across cultures among U.S. and Middle Eastern executives (Elsayed-Ekhouly & Buda, 1996) and among Jordanian, Turkish, and U.S. managers (Kozan, 1989), as well as moral judgment and conflict handling styles among Chinese undergraduate business and MBA students in Hong Kong and People's Republic of China (Chow & Ding, 2002).

**Intolerance of Uncertainty Scale.** The Intolerance of Uncertainty Scale (IUS) measures individuals' emotional, cognitive, and behavioral reactions to ambiguous and uncertain situations, such as stress and frustrations, as well as individuals' attempts to control the future and their inability to act (Khawaja & Yu, 2010). The scale includes 27 items describing how people may react to uncertainties in life. Typical items include "Uncertainty makes life intolerable," "One should always look ahead as to stop surprises," and "I must get away from

uncertain situations” (Buhr & Dugas, 2002). Each of the items is rated on a 5-point Likert scale with responses varying from “Strongly disagree” to “Strongly agree”.

The IUS demonstrates internal consistency with Cronbach alpha scores ranging from .91 to .94 (Khawaja & Yu, 2010; Chen & Hong, 2010;) as well as test-retest reliability  $r$  of .74 (Chen & Hong).

The scale has been widely used in psychology research examining a variety of topics:

- Worry, anxiety, and depression (Boelen, Vrinssen, & van Tulder, 2010; Ruggiero, Stapinski, Caselli, Fiore, Gallucci, Sassaroli, & Rapee, 2012; de Bruin, Rassin, & Muris, 2006; Mahoney & McEvoy, 2012; Chen & Hong, 2010);
- Eating disorders (Frank, Roblek, Shott, Jappe, Rollin, Hagman, & Pryor, 2012; Stewart, 2009; Konstantellou & Reynolds, 2010; Sternhein, Startup, & Schmidt, 2011);
- Obsessive-compulsive disorder (Tolin, Abramowitz, Brigidi, & Foa, 2003);
- Psychological adjustment in patients with lung cancer (Kurita, Garon, Stanton, & Meyerowitz, 2013); and
- Postpsychotic posttraumatic stress disorder (White & Gumley, 2009).

The scale also has been used in non-U.S. samples to test psychometric properties of the intolerance of uncertainty scale in a Chinese-speaking population (Yang, 2013), as well as in among African Americans, Caucasian, Hispanic, and Southern Asian racial groups (Norton, 2005).

### **Pre-test**

Prior to surveying the sample, a group of 25 international students who met the criterion for inclusion in the study responded to a pre-test version of the survey. The international students participating in the pre-test were Fulbright Foreign Student program participants studying in

various universities across the U.S. The pre-test version included the above described questionnaires and comment boxes for feedback that were placed after every five survey questions. Interviews were carried out with several pre-test participants to follow up on their feedback. There may be potential differences between the pre-test sample consisting of Fulbright students and the research sample of international students in this study. Fulbright students' individual personalities may differ from those of average international students as Fulbright students self-select to compete for the prestigious and highly competitive global exchange program. Wording changes and adjustments were made based on the pre-test feedback and approved by the IRB office for future use.

The modified survey was administered to the research sample and responses to each questionnaire were analyzed using the SPSS software. Bivariate and partial correlations, as well as paired samples t-tests were computed. Chapter Four details the results.

## Chapter Four

### RESULTS

A series of preliminary analyses (i.e., factor analysis, inter-item reliability checks, and independent samples t-tests) were conducted prior to primary analysis. Bivariate and partial correlations, as well as paired samples t-tests were computed to answer the research questions. Detailed descriptions of those analyses and results are discussed below.

#### Preliminary Analyses

Three sets of preliminary analyses were conducted. First, an independent samples t-test was conducted to compare raw scores of all items from all instruments across two sets of participants: a first set of participants who received the questionnaires in randomized order ( $n = 104$ ), and another set of participants who completed non-randomized questionnaires ( $n = 75$ ). There was a significant difference in the scores for only 2 of the 83 items: Item 18 in the Intolerance of Uncertainty Scale and Item 22 in the Rahim Organizational Conflict Inventory II for both hypothetical conflict scenarios.

Item 18 in the Intolerance of Uncertainty Scale was “I always want to know what the future has in store for me.” The Item 22 in the Rahim Organizational Conflict Inventory II was “I will openly discuss all my concerns about the class project with my project partner and ask him/her to voice all of his/her concerns so that the issue can be resolved in the best possible way.” Item 18 was  $M = 2.96$ ,  $SD = 1.048$  versus  $M = 3.42$ ,  $SD = 1.095$ , with  $t(150) = -2.63$ ,  $p = 0.009$ . Item 22 with a U.S. partner was  $M = 4.11$ ,  $SD = 1.021$  versus  $M = 3.54$ ,  $SD = 1.149$ ,  $t(117) = -2.80$ ,  $p = 0.006$ , as well as with a partner from a participant’s native country  $M = 4.37$ ,  $SD = .846$  versus  $M = 3.81$ ,  $SD = 1.076$ ,  $t(121) = -3.20$ ,  $p = 0.002$ . For all further analyses, the values for each of the aforementioned items were adjusted for participants whose questionnaires

were not randomized. Specifically, the mean difference between the groups was either added or subtracted from their values.

Next, a confirmatory factor analysis with a Varimax (orthogonal) rotation of the 83 survey questions on the full data set gathered from the 119 participants (using listwise deletion of data with missing values) was conducted to determine the factors that could be used in further analyses. The analysis yielded 5 factors: factor 1 was labeled Intolerance of Uncertainty, as the majority of items in the factor (i.e., 20 of the 27 items) were from that scale. Using parallel criteria, factors 2 through 5 were labeled Integrating-Compromising, Obliging, Dominating, and Avoiding conflict management strategies respectively. Based on the results of factor analysis, items 4, 20 and 23 in the Intolerance of Uncertainty Scale and item 3 for the hypothetical conflict scenario with a fellow student from participant's native country for the Rahim Organizational Conflict Inventory II were reverse coded. The Cronbach alpha for the Intolerance of Uncertainty Scale was .93. Cronbach alpha scores for Integrating-Compromising, Obliging, Dominating, and Avoiding conflict management strategies were .87, .87, .90, and .84 respectively, indicating that all scales had acceptable internal consistency.

A review of the frequency distributions revealed multiple non-normal distributions. Therefore, nonparametric statistical tests were used for subsequent analyses except for comparisons between two groups. For such comparisons, the t-test remains the most rigorous test and a viable option, given the robustness of the t-statistic (McNemar, 1969).

Finally, analyses were conducted to test for possible confounding variables (age, sex, and academic standing). The Spearman's rank-order correlation revealed a statistically non-significant relationship between the age of participants in the study and their intolerance of uncertainty level (Spearman  $r = -.095$ ,  $n = 109$ ,  $ns$ ), avoiding (Spearman  $r = -.023$ ,  $n = 109$ ,  $ns$ ),

obliging (Spearman  $r = -.012$ ,  $n = 105$ , *ns*), dominating (Spearman  $r = -.025$ ,  $n = 108$ , *ns*), and/or integrating-compromising conflict management strategies (Spearman  $r = .146$ ,  $n = 106$ , *ns*).

Also, the Spearman's rho scores revealed a statistically non-significant relationship between the academic standing of participants in the study and their intolerance of uncertainty level (Spearman  $r = -.071$ ,  $n = 110$ , *ns*), avoiding (Spearman  $r = -.052$ ,  $n = 110$ , *ns*), obliging (Spearman  $r = -.040$ ,  $n = 105$ , *ns*), dominating (Spearman  $r = -.068$ ,  $n = 108$ , *ns*), and/or integrating-compromising conflict management strategies (Spearman  $r = .120$ ,  $n = 106$ , *ns*). That is, neither age, nor academic standing accounted for variation in the intolerance of uncertainty and the four conflict strategies scores. An independent samples t-test revealed a statistically significant difference in the scores for male ( $M = 4.06$ ,  $SD = .589$ ) versus female ( $M = 4.27$ ,  $SD = .496$ ) participants only for the preferred use of integrating-compromising conflict management strategy  $t(103) = -1.99$ ,  $p = .049$ .

### **Primary Analyses**

A Spearman's rank-order correlation was calculated to answer RQ1 (What is the relationship between individuals' uncertainty avoidance level and their preferred use of conflict management strategies?). The Spearman's rho revealed a statistically significant relationship between participants' intolerance of uncertainty scores and the avoiding scores (Spearman  $r = .307$ ,  $n = 103$ ,  $p < .01$  two-tailed), as well as the dominating scores (Spearman  $r = .362$ ,  $n = 101$ ,  $p < .01$  two-tailed). That is, the higher the intolerance of uncertainty scores, the higher both the avoiding and dominating scores. More specifically, the intolerance scores accounted for 9% of the variation in the avoiding scores,  $r^2 = .09$ , and for 12% of the variation in the dominating scores,  $r^2 = .12$ . Table 1 displays the results.

**Table 1. Bivariate Correlations.**

		Avoiding strategy	Dominating strategy	Obliging strategy	Integrating-compromising strategy	Intolerance of uncertainty	
Spearman's $r$	Avoiding strategy	Correlation Coefficient	1.000	.037	.497**	-.118	.307**
		Sig. (2-tailed)	.	.693	.000	.212	.002
		N	117	114	111	113	103
	Dominating strategy	Correlation Coefficient	.037	1.000	-.025	-.256**	.362**
		Sig. (2-tailed)	.693	.	.794	.007	.000
		N	114	115	109	111	101
	Obliging strategy	Correlation Coefficient	.497**	-.025	1.000	.085	.000
		Sig. (2-tailed)	.000	.794	.	.383	.998
		N	111	109	111	108	99
	Integrating-compromising strategy	Correlation Coefficient	-.118	-.256**	.085	1.000	-.252*
		Sig. (2-tailed)	.212	.007	.383	.	.012
		N	113	111	108	113	99
	Intolerance of uncertainty	Correlation Coefficient	.307**	.362**	.000	-.252*	1.000
		Sig. (2-tailed)	.002	.000	.998	.012	.
		N	103	101	99	99	137
**.				Correlation is significant at the 0.01 level (2-tailed).			
*.				Correlation is significant at the 0.05 level (2-tailed).			

Because an independent samples t-test revealed a statistically significant difference in the scores by male and female participants for the preferred use of integrating-compromising strategy, a partial correlation was calculated to assess the possible relationship between the intolerance of uncertainty scores and integrating-compromising scores controlling for sex. This parametric test was employed as no parallel non-parametric test exists. The partial correlations between intolerance of uncertainty level and preferred use of integrating-compromising strategy

controlling for sex revealed a statistically significant negative correlation,  $r(96) = -.320, p < .01$ .

When controlling for the influence of sex, the higher the intolerance of uncertainty score, the lower the integrating-compromising score. That is, when controlling for sex, the intolerance of uncertainty scores can account for 9% of the variation in the integrating-compromising scores  $r^2 = .09$ . The results of partial correlation are displayed in Table 2.

**Table 2. Partial Correlations Controlling for Sex.**

		Correlations						
		Avoiding strategy	Dominating strategy	Obliging strategy	Integrating-compromising strategy	Intolerance of uncertainty	Sex	
Sex		Sig. (2-tailed)	.071	.229	.396	.049	.886	.
		Df	107	105	102	103	107	0
	Avoiding strategy	Corr.	1.000	.068	.487	-.170	.323	
		Sig. (2-tailed)	.	.487	.000	.084	.001	
		Df	0	104	101	102	100	
	Dominating strategy	Corr.	.068	1.000	-.021	-.214	.359	
		Sig. (2-tailed)	.487	.	.835	.029	.000	
		Df	104	0	101	102	98	
	Obliging strategy	Corr.	.487	-.021	1.000	.039	-.022	
		Sig. (2-tailed)	.000	.835	.	.692	.833	
		Df	101	101	0	101	96	
	Integrating-compromising strategy	Corr.	-.170	-.214	.039	1.000	-.320	
		Sig. (2-tailed)	.084	.029	.692	.	.001	
		Df	102	102	101	0	96	
	Intolerance of uncertainty	Corr.	.323	.359	-.022	-.320	1.000	
		Sig. (2-tailed)	.001	.000	.833	.001	.	
		Df	100	98	96	96	0	
	a. Cells contain zero-order (Pearson) correlations.							

A paired samples t-test was employed to answer RQ2 (Are there differences between individuals' preferred use of conflict management strategies in intercultural versus intracultural conflict situations?). Although the t-test is a parametric statistical test, its assessment is robust in part due to large sample size used in the study (McNemar, 1969). The results of a paired samples t-test revealed only limited differences between the scores for two scenarios. Analyses revealed significant differences for 7 of the 28 items (25%). Specifically, the only difference that emerged in five out of seven items measuring the integrating-compromising score was that the mean value for a hypothetical conflict with a student from participant's native country was higher than for a conflict scenario with a U.S. student. A summary of statistically significant differences in the scores for the two conflict scenarios is presented below. Full results of the paired samples t-test are displayed in Table 3 in the end of the document.

<b>Item</b>	<b>Conflict partner</b>	<b>M</b>	<b>SD</b>	<b>T</b>	<b>df</b>	<b>p</b>
22. I will openly discuss all my concerns about the class project with my project partner and ask him/her to voice all his/her concerns so that the issue can be resolved in the best possible way.	U.S.	4.11	1.07	3.53	117	.001
	Native	4.35	.95			
23. I will collaborate with my project partner to come up with a decision about class project acceptable to both of us.	U.S.	4.16	1.03	2.86	118	.005
	Native	4.31	.91			
21. I will be firm in pursuing my side of the issue with my project partner.	U.S.	2.90	1.07	2.80	117	.006
	Native	3.05	1.09			
14. I will propose a middle ground for breaking the deadlock with my project partner.	U.S.	3.69	1.10	2.88	117	.005
	Native	3.84	1.01			
4. I will try to integrate my ideas with those of my project partner to come up with a decision jointly.	U.S.	4.12	.94	2.08	117	.040
	Native	4.26	.82			
3. I will try to keep my conflict to myself and accept my project partner's choice of format to complete the class project.	U.S.	2.80	1.26	2.21	121	.029
	Native	3.28	1.25			
1. I will try to investigate an issue with my project partner to find a solution acceptable to both of us.	U.S.	4.05	1.12	3.48	123	.001
	Native	4.35	.83			

## **Chapter Five**

### **DISCUSSION**

#### **Summary of Results**

Statistical analyses revealed a correlation between participants' intolerance of uncertainty scores and their preferred use of dominating and avoiding conflict management strategies. When controlling for sex, intolerance of uncertainty scores were negatively correlated with the use of integrating-compromising conflict-management strategies. The study also revealed limited differences between the ways international students handled interpersonal conflict in intracultural versus intercultural settings; differences only emerged for integrating-compromising strategies.

#### **Interpretation of Findings**

RQ1 queried the relationship between individuals' intolerance of uncertainty level and their preferred use of conflict management strategies. Analyses indicated that when individuals' intolerance of uncertainty scores increased, both their preferred use of avoiding and dominating strategies increased. The increased preference for the dominating strategy was particularly higher. Specifically, the intolerance of uncertainty scores accounted for 9% of the variation in the avoiding scores and for 12% of the variation in the dominating scores. Also, the results revealed that when controlling for sex, the higher the individuals' intolerance of uncertainty score, the lower their preference for integrating-compromising strategy. Finally, statistical analysis revealed no relationship between intolerance of uncertainty and obliging scores. I offer several explanations for these findings:

1. Considering that the dominating strategy is characterized by high concern for self and low concern for others, while the avoiding strategy is characterized by low concern for both self and others (Oetzel, Ting-Toomey, Yokochi, Masumoto, & Takai, 2000), perhaps, as individuals'

intolerance of uncertainty increases, the concern for others (versus self) in conflict decreases. Then, individuals have a choice of two “low concern for others” strategies: avoiding and dominating. Given that dominating strategies (versus avoiding) are usually characterized by higher concern for self (Oetzel et al, 2000), as the concern for self increases, so does the preferred use of the dominating strategy. But if the concern is low both for self and others, an individual may tend to avoid the conflict.

2. Another possible explanation for this finding lies in the fact that the choice of conflict management strategies is not mutually exclusive and no individual can be characterized as having only one, rigid style of handling conflict (Bobot, 2010). Instead, each individual has a number of “go-to” strategies that he or she employs in conflict situations. For example, one individual can have a tendency to use both dominating and avoiding strategies. Depending on the conflict situation, this individual can use either a dominating strategy, or the next strategy on his or her mental “go-to” list of strategies, perhaps, avoiding.

3. Significant correlations between individuals’ uncertainty scores and their preference for integrating-compromising strategies might be explained by the fact that, according to Hofstede's cultural dimensions theory, societies with high levels of uncertainty avoidance are characterized by rigid codes of belief and behavior that manifest in rules and norms regulating individuals' actions in various situations (Hofstede & Hofstede, 2005). Individuals in societies with high levels of uncertainty avoidance are expected to adhere to such norms strictly, and deviation from the norms is often considered abnormal (Hofstede & Hofstede). At the same time, the integrating-compromising strategy may involve the most creative thinking because it requires all parties in the conflict to be creative and develop an alternative and often unorthodox “win-win” solution to the conflict situation. Therefore, employment of the integrating-compromising

strategy may be looked upon as deviant in societies with high uncertainty avoidance levels. For instance, Japan scored 92 in Hofstede's country index and is characterized as “one of the most uncertainty avoiding countries on earth” (*The Hofstede Centre*, n.d.). Geographic location that puts Japan under a constant threat of natural disasters taught the Japanese to prepare themselves for any uncertain situation. There are emergency plans not only for sudden natural disasters, but also for every other aspect of life. Life in Japan is highly ritualized and ceremonial. Instructions on what to wear and how to behave are described in great detail in etiquette books (*The Hofstede Centre*, n.d.). Therefore, a search for alternative solutions integrating the interests of both conflict partners may be looked upon as a deviant behavior that is outside the culture norm in Japan. The case with Japan is illustrative of an attitude toward “creative” integrating-compromising conflict strategies in other uncertainty avoiding countries.

4. Next, statistical analysis revealed no relationship between intolerance of uncertainty and obliging scores. However, a correlation between obliging and avoiding scores yielded a statistically significant relationship (Spearman  $r = .497$ ,  $n = 111$ ,  $p < .01$  two-tailed). This is a serendipitous finding that can be explained by the fact that obliging and avoiding strategies are close conceptually. The obliging strategy is the closest one to avoiding on the “concern for other” versus “concern for self” continuum. While the avoiding strategy is characterized by low concern for individual’s interests and the interests of his/her conflict partner, the obliging strategy is often referred to as “yielding to other person’s interests” and is characterized by low concern for self (Bobot, 2010). Therefore, individuals in this particular population might be avoiding conflict situations by obliging, or yielding to other person’s interests.

5. Because cultural dimensions like individualism/collectivism, power distance, femininity, and uncertainty avoidance are often correlated, this finding also may help explain the

influence of other variables on the preferred use of conflict management strategy. For instance, according to Ting-Toomey's Face Negotiation Theory, the members of individualist cultures tend to be assertive and defend the "I" identity and, therefore, use more dominating strategies. In contrast, members of collectivist cultures tend to avoid more in order to maintain relational harmony and diffuse any possible shame and embarrassment (Ting-Toomey, Gao, Trubitsky, Yang, Kim, Lin, & Nishida, 1991; Oetzel et al., 2000). Also, the results in this study revealed that when controlling for sex, the higher the individuals' intolerance of uncertainty score, the lower their preference for integrating-compromising strategy. Significant correlation between sex and the use of the integrating-compromising strategy is not surprising. Past research revealed gender differences in handling conflict; for example, females prefer to use mitigative or indirect tactics for conflict resolution (Ohbuchi, Fukushima, & Tedeschi, 1999). According to Ohbuchi et al (1999), "female participants preferred third party-intervention more and assertive tactics less than male participants, independent of culture" (p. 68). Thus, such a gendered style of conflict resolution may be related to women's (versus men's) motivation to maintain relationships.

RQ2 queried the differences between individuals' preferred use of conflict management strategies in intercultural versus intracultural conflict situations. Paired samples t-tests assessed differences between the participants' scores for the two hypothetical conflict scenarios. The results revealed limited differences between the scores for two scenarios. Specifically, the only difference that emerged in five out of seven items measuring the integrating-compromising score was that the mean value for a hypothetical conflict with a student from participant's native country was higher than for a conflict scenario with a U.S. student. I offer several explanations for this finding:

1. This finding is not surprising given that integrating and compromising strategies are the strategies that require “the most work.” To recap, the integrating strategy is characterized as both assertive and cooperative; it is often called a “win-win” strategy because it typically leads to a solution that is a genuine integration of the desires of both sides to win (Bobot, 2010). Compromising strategies are marked by a smaller level of assertiveness and cooperation (Bobot). Compromising strategy’s goal is finding a “quick, mutually agreeable solution that partially satisfies everybody” and is often referred to as “the middle ground” (Bobot, p. 296). While avoiding conflict altogether, obliging to the needs and wants of the conflict partner, or dominating one’s way through a conflict situation might require less effort, truly integrating, synergizing, working together to find a long -term “win-win” solution, or at least a temporary “middle ground” suitable to both sides, requires time and effort.

2. Perceived differences in cultural values may weaken the motivation to engage in integrating-compromising behavior with someone from a foreign culture. Therefore, participants might have scored higher on integrating-compromising conflict style with representatives of their own culture because they believed that it would be easier to engage in such strategies with someone who is more like themselves. Previous research supports such explanation. Oetzel et al (2000) found that the in-group-out-group boundary influences individuals’ concern for face and subsequent conflict behaviors. In-groups are groups of individuals “about whose welfare the person is concerned, with whom that person is willing to cooperate without equitable returns” (p. 403). Out-groups are those groups or individuals “with whom one has something to divide, perhaps unequally, or are harmful in some way, groups that disagree on value attributes” (p. 403). While studying abroad, international students may perceive fellow students from their own country as in-groups. U.S. students who may not share participants’ cultural values may be

perceived as out-groups. Thus, students may have less motivation to engage in integrating-compromising conflict behaviors with the latter.

3. The results of no significant differences between the preferred uses of all other conflict strategies with intercultural and intracultural conflict partners may be because these strategies do not require as much effort and creativity as the integrating-compromising style. Hence, international students studying in the U.S. may use these strategies as their usual “go-to” strategies in all conflict situations regardless of the culture of their conflict partner.

4. Students’ gender, a major area of study, or academic standing might have served as stronger factors than culture for participants in the study when managing the conflict. Regardless of their countries of origin, students often form support groups with students from their program, major or year to study and help each other with schoolwork. In the case of the scenario presented in this study, such identity of belonging to one major, or program might have overridden the cultural identity.

### **Limitations and Directions for Future Research**

The limitations for this study are fivefold. First, the choice of conflict scenario, although realistic for the test population, might have limited the results; it only concerned the academic sphere of life and was highly task-oriented. International students coming to study in the United States often rely on scholarships covering their tuition and other school-related expenses. Good grades are almost always a requirement for maintaining such scholarships. Participants, regardless of their country of origin, may have believed that they “had to” solve the hypothetical conflict quickly and successfully to do well in school and, thus, may have chosen more engaging and integrating-compromising strategies rather than confronting. In addition, this limitation may have impacted the differences between intracultural and intercultural conflict management. It

would be interesting to investigate conflict management in intracultural and intercultural settings using an alternative scenario involving a private life situation such as a conflict with a roommate over distribution of house chores. Furthermore, interdependence that is characteristic of romantic relationships and within friendships may be weaker for the scenario employed in this study, making resolution of conflict less crucial for participants. Future research might focus on exploration of conflict management strategies employed by representatives of multiple cultures across a variety of relationships and situations. Moreover, past studies suggest that the influence of culture on conflict management strategies diminishes when these strategies are contextualized within close relationships rather than when they are not contextualized (Cingoz-Ulu & Lalonde, 2007). Future research also could focus on exploration of conflict management strategies across cultures in interpersonal relationships of varying degrees of closeness.

Second, perceived valence of uncertainty and ambiguity may vary by culture. People coming from uncertainty avoiding countries that “maintain very rigid codes of belief and behavior and are intolerant of unorthodox behavior and ideas” may view uncertainty negatively. In contrast, people from countries with low uncertainty avoidance that “maintain a more relaxed attitude in which practice counts more than principles” can be more open to ambiguity (*The Hofstede Centre*, n.d.). Such cultural differences may have impacted participants’ choice of socially desirable answers. Moreover, a review of literature revealed that the Intolerance of Uncertainty Scale had not been used in interpersonal communication research or across a wide variety of non-U.S. populations in the past. Better assessment tools for measuring intolerance of uncertainty across differing populations, including populations from non-U.S. countries, would benefit future intercultural research.

Third, the choice of an international student sample for this study had both advantages and disadvantages. Given that multiple cultures were represented, the sample allowed for a broad assessment of the variables under study. However, because of students' extensive exposure to American culture, the participants may have "lost" some of their native cultural differences that influence communication and may have "picked up" the host culture's views about conflict. The United States is an individualist society, and individuals' assertiveness, integrating, and even dominating conflict strategies are more socially acceptable in the U.S. Thus, the participants might have chosen these strategies more often when completing the conflict questionnaire for a hypothetical conflict scenario with a U.S. student. Research suggests that cultural sojourners may negotiate their conflict management strategies during their extended stay abroad and that they may learn and employ new ways of managing conflict to their partners from the host culture (Sun & Starosta, 2001). It would be interesting to replicate this study with a population of foreign sojourners in the U.S. staying here for shorter periods of time.

Fourth, it is possible that the cultural distance may have been narrowly conceptualized in this study. Previous research documented that variables such as cultural femininity (Leung, Bond, Carment, Krishnan, & Liebrandt, 1990), collectivism-individualism (Ohbuchi & Takahashi, 1994) or communication contextuality (Chua & Gudykunst, 1987) influence the way interpersonal conflict is enacted. Lastly, gender, a major area of study, or academic standing might have served as more influential factors than culture for participants in this study. Such factors might explain the limited differences in the way international students completed the conflict instrument for two different scenarios. Participants' culture may not have served as their primary identity. According to Shupe (2007),

Many international graduate students spend a great deal of time studying in highly competitive, prestigious universities in their home countries before coming to the United States. It is possible that this common 'university culture' was salient enough to override the national culture in their identity, enabling students to engage in successful, nonconflictual interactions (p. 765).

Lastly, all participants were studying in the same small college town in the same region of the U.S. Thus, future research based on more diverse samples of international students studying at urban institutions and in additional regions of the country may provide a wider range of responses.

## **Conclusion**

This study contributes to our discipline's understanding of intercultural communication and conflict management by investigating how cultural differences conceptualized via the uncertainty avoidance cultural dimension and assessed via the intolerance of uncertainty scores may impact the way cultural sojourners from multiple cultures report engaging in interpersonal conflict in the U.S. This study represents the first study that explores potential differences in the way international students handle intercultural and intracultural conflict while studying abroad. This study also contributes to the evolving body of research carried out with international students populations. The results of this study raised multiple issues that might be of interest to future scholars using alternative research methods.

Analyses indicated that the higher the intolerance of uncertainty scores, the higher the use of dominating and avoiding strategies. The results in this study also revealed that when controlling for sex, the higher the individuals' intolerance of uncertainty score, the lower their preference for integrating-compromising strategy. Furthermore, in an academic scenario, limited

differences emerged between the ways international students handled conflict with partners from their own culture versus representatives of a foreign culture, specifically the U.S.A.

The results of the present study can be incorporated into international student orientations in U.S. universities. Workshops raising new international students' awareness about concepts such as cultural distance, interpersonal conflict, and conflict management strategies may improve students' interpersonal communication both in intercultural and intracultural encounters, as well as make their stay abroad a more pleasant experience.

## REFERENCES

- Ahose, D. K. (1995). *The effects of formal and informal relations on choice of interpersonal conflict resolution strategy*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI Number: 9618128).
- Alakavuklar, O. N., & Cakar, U. (2012). The role of ethics on conflict handling styles: A scenario based study. *Turkish Journal of Business Ethics*, 5, 89-116.
- Albers-Miller, N. D., & Gelb, B. D. (1996). Business advertising appeals as a mirror of cultural dimensions: A study of eleven countries. *Journal of Advertising*, 25, 57-70.
- Ananthanarayanan, V., & St. Clair, N. S. (2012). Building bridges: Contextualizing worldviews through cultural syndromes and the importance of expressing metaphorical perspective. *Cross-Cultural Communication*, 8, 1-7.
- Blodgett, J. G., Lu, L., Rose, G. M., & Vitell, S. J. (2001). Ethical sensitivity to stakeholder interests: A cross-cultural comparison. *Journal of the Academy of Marketing Science*, 29, 190-202.
- Bippus, A. M., & Rollin, E. (2003). Attachment style differences in relational maintenance and conflict behaviors: Friends' perceptions. *Communication Reports*, 16, 113-123.
- Bobot, L. (2010). Conflict management in buyer-seller relationships. *Conflict Resolution Quarterly*, 27, 291-319.
- Boelen, P. A., Vrinssen, I., & van Tulder, F. (2010). Intolerance of uncertainty in adolescents: Correlations between worry, social anxiety, and depression. *Journal of Nervous and Mental Disease*, 198, 194-200.
- Brewer, N., Mitchell, P., & Weber, N. (2002). Gender role, organizational status, and conflict management styles. *International Journal of Conflict Management*, 13, 78-94.
- Brewer, N., & Lam, G. K. (2009). Conflict handling preferences: A public-private comparison. *Public Personnel Management*, 38, 1-14.
- Broderick, A. J. (2007). A Cross-national study of the individual and national-cultural nomological network of consumer involvement. *Psychology & Marketing*, 24, 343-374.
- Buhr, K., & Dugas, M. J. (2002). The Intolerance of Uncertainty Scale: Psychometric properties of the English version. *Behaviour Research and Therapy*, 40, 931-945.
- Callanan, G. A., Benzing, C. D., Perri, D. F. (2006). Choice of conflict-handling strategy: A matter of context. *Journal of Psychology*, 140, 269-288.

- Chen, C. Y., & Hong, R. Y. (2010). Intolerance of uncertainty moderates the relationship between negative life events and anxiety. *Personality and Individual Differences, 49*, 49-53.
- Chow, I. H., & Ding, D. Z. (2002). Moral judgment and conflict handling styles among Chinese in Hong Kong and PRC. *Journal of Management Development, 21*, 666-679.
- Chua, E.G., & Gudykunst, W.B. (1987). Conflict resolution styles in low- and high-context cultures. *Communication Research Reports, 4*, 32-37.
- Cingoz-Ulu, B., & Lalonde, R. N. (2007). The role of culture and relational context in interpersonal conflict: Do Turks and Canadians use different conflict management strategies? *International Journal of Intercultural Relations, 31*, 443-458.
- Davis, J. D., Bernardi, R. A., & Bosco, S. M. (2013). Examining the use of Hofstede's uncertainty avoidance construct in a major role in ethics research. *International Business Research, 6*, 63-75.
- De Bruin, G. O., Rassin, E., & Muris, P. (2006). Worrying in the lab: Does intolerance of uncertainty have predictive value? *Behaviour Change, 23*, 138-147.
- Dumlao, R., & Botta, R. (2000). Family communication patterns and the conflict styles young adults use with their fathers. *Communication Quarterly, 48*, 174-189.
- Donohue, W. A., & Kolt, R. (1992). *Managing interpersonal conflict*. Newbury Park, CA: Sage.
- Elsayed-Ekhouly, S. M., & Buda, R. (1996). Organizational conflict: A comparative analysis of conflict styles across cultures. *International Journal of Conflict Management, 7*, 71-81.
- Finkelstein, M. A. (2012). Individualism/collectivism and organizational citizenship behavior: An integrative framework. *Social Behavior and Personality, 40*, 1633-1643.
- Frank, G. K., Roblek, T., Shott, M. E., Jappe, L. M., Rollin, M. D., Hagman, J. O., & Pryor, T. (2012). Heightened fear of uncertainty in anorexia and bulimia nervosa. *International Journal of Eating Disorders, 45*, 227-232.
- Gudykunst, W. B., & Lee, C. M. (2002). Cross-cultural communication theories. In W. B. Gudykunst, & B. Mody (Eds.), *Handbook of international and intercultural communication* (2<sup>nd</sup> ed., pp. 25-50). Thousand Oaks, CA: Sage.
- Gudykunst, W. B. (2005). An anxiety/uncertainty management (AUM) theory of effective communication. In W. B. Gudykunst (Ed.), *Theorizing about intercultural communication* (pp. 281-322). Thousand Oaks, CA: Sage.

- Gudykunst, W. B., Lee, C. M., Nishida, T., & Ogawa, N. (2005). Theorizing about intercultural communication: An introduction. In W. B. Gudykunst (Ed.), *Theorizing about intercultural communication*. Thousand Oaks, CA: Sage.
- Hammock, G. S., Richardson, D. R., Pilkington, C. J., & Utley, M. (1990). Measurement of conflict in social relationships. *Personality and Individual Differences, 11*, 577-583.
- Hewitt, K., Money, R. B., & Sharma, S. (2006). National culture and industrial buyer-seller relationships in the United States and Latin America. *Journal of the Academy of Marketing Science, 34*, 386-402.
- Hoeken, H., van den Brandt, C., Crijns, R., Dominguez, N., Hendriks, B., Planken, B., & Starren, M. (2003). International advertising in Western Europe: Should differences in uncertainty avoidance be considered, when advertising in Belgium, France, The Netherlands and Spain? *Journal of Business Communication, 40*, 195-218.
- Hofstede, G., & Hofstede, G. J. (2005). *Cultures and organizations: Software of the mind* (2<sup>nd</sup> Ed.). New York, NY: McGraw-Hill.
- Hong, J. (2004). *A comparison of Korean and U.S. American conflict management styles related to communication apprehension*. (Doctoral dissertation). ProQuest Theses and Dissertations. UMI Number: 3176504.
- Huang, L. (2009). *Solving conflict in academic contexts: A comparison of U.S. and Taiwanese college students*. (Master's thesis). Retrieved from ProQuest Dissertations and Theses. (UMI Number: 1469280).
- Jian, G., Pettey, G., Rudd, J., & Lawson, D. (2007). Masculinity/femininity and compliance-gaining tactics in business negotiations: A cross-cultural comparison. *Journal of Northwest Communication Association, 36*, 93-110.
- Jung, J. M., & Kellaris, J. J. (2004). Cross-national differences in proneness to scarcity effects: The moderating roles of familiarity, uncertainty avoidance, and need for cognitive closure. *Psychology & Marketing, 21*, 739-753.
- Kailani, M. A., & Kumar, R. (2011). Investigating uncertainty avoidance and perceived risk for impacting Internet buying: A study in three national cultures. *International Journal of Business and Management, 6*, 76-92.
- Kantek, F., & Gezer, N. (2009). Conflict in schools: Student nurses' conflict management styles. *Nurse Education Today, 29*, 100-107.
- Keenan, G. M. (1994). *Nurse management of conflicts with physicians in emergency rooms*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI Number: 9506457).

- Khawaja, N. G., & Yu, L. N. (2010). A comparison of 27-item and 12-item intolerance of uncertainty scales. *Clinical Psychologist, 14*, 97-106.
- Kilmann, R. H., & Thomas, K. W. (1977). Developing a forced-choice measure of conflict-handling behavior: The MODE instrument. *Educational and Psychological Measurement, 37*, 309-325.
- Komarraju, M., Dollinger, S. J., & Lovell, J. L. (2008). Individualism-collectivism in horizontal and vertical directions as predictor of conflict management styles. *International Journal of Conflict Management, 19*, 20-35.
- Konstantellou, A., & Reynolds, M. (2010). Intolerance of uncertainty and metacognitions in a non-clinical sample with problematic and normal eating attitudes. *Eating Behaviors, 11*, 193-196.
- Kozan, K. (1989). Cultural influences on styles of handling interpersonal conflict: Comparisons among Jordanian, Turkish, and U.S. managers. *Human Relations, 42*, 787-790.
- Kozan, K. (1991). Interpersonal conflict management styles of Jordanian managers. In K. Avruch, P. W. Black, & J. A. Scimecca (Eds.), *Conflict resolution: Cross-cultural perspectives* (pp. 85-105). Westport, CT: Greenwood.
- Kurita, K., Garon, E. B., Stanton, A. L., & Meyerowitz, B. E. (2013). Uncertainty and psychological adjustment in patients with lung cancer. *Psycho-oncology, 22*, 1396-1401.
- Lancaster, K. (1986). *Conflict management in situations of sexual harassment: An exploratory study*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI Number: 8629029).
- Landa-Gonzalez, B. (2005). *The conflict resolution behaviors of occupational therapy students as a function of the personality types, demographic characteristics and contextual factors*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI Number: 3206026).
- Leung, K., Bond, M. H., Carment, D. W., Krishnan, L., & Liebrandt, W. B. (1990). Effects of cultural femininity on preference for methods of conflict processing: A cross-cultural study. *Journal of Experimental Social Psychology, 26*, 373-388.
- Lee, S. (2002). Mediation techniques of an informal intermediary in intercultural-interpersonal conflict. *Human Communication, 11*, 461-482.
- Lee, J. A., Garbarino, E., & Lerman, D. (2007). How cultural differences in uncertainty avoidance affect product perceptions. *International Marketing Review, 24*, 330-349.

- Litvin, S. W., Crotts, J. C., & Hefner, F. L. (2004). Cross-cultural tourism behavior: A replication and extension involving Hofstede's uncertainty avoidance dimension. *International Journal of Tourism Research, 6*, 29-37.
- Mahoney, A. E., & McEvoy, P. M. (2012). Trait versus situation-specific intolerance of uncertainty in a clinical sample with anxiety and depressive disorders. *Cognitive Behaviour Therapy, 41*, 26-39.
- McNemar, Q. (1969). *Psychological Statistics* (4<sup>th</sup> ed.). New York: Wiley.
- Meeuwesen, L., van den Brink-Muinen, A., & Hofstede, G. (2009). Can dimensions of national culture predict cross-national differences in medical communication? *Patient Education and Counseling, 75*, 58-66.
- Nayeem, T. (2012). Cultural influences on consumer behavior. *International Journal of Business and Management, 7*, 78-91.
- Nayeem, T. (2012). Decision-making styles of individualist and collectivist automobile consumers in Australia. *International Journal of Business and Management, 7*, 44-55.
- Neuliep, J., & Speten, K. M. (2007, November). The influence of ethnocentrism on facework and conflict styles during intercultural conflict. Paper presented at the annual meeting of the NCA 93<sup>rd</sup> Annual Convention, Chicago, IL
- Ni, L., & Wang, Q. (2011). Anxiety and uncertainty management in an intercultural setting: The impact on organization-public relationships. *Journal of Public Relations Research, 23*, 269-301.
- Norton, P.J. (2005). A psychometric analysis of the Intolerance of Uncertainty Scale among four racial groups. *Anxiety Disorders, 19*, 699-707.
- Oetzel, J. G., Ting-Toomey, S., Yokochi, Y., Masumoto, T., & Takai, J. (2000). A typology of facework behaviors in conflicts with best friends and relative strangers. *Communication Quarterly, 48*, 397-419.
- Ohbuchi, K., Fukushima, O., & Tedeschi, J. T. (1999). Cultural values in conflict management: Goal orientation, goal attainment, and tactical decision. *Journal of Cross-Cultural Psychology, 30*, 51-71.
- Ohbuchi, K., & Takahashi, Y. (1994). Cultural styles of conflict management in Japanese and Americans: Passivity, covertness, and effectiveness of strategies. *Journal of Applied and Social Psychology, 24*, 1345-1366.
- Open Doors: Report on International Educational Exchange. (2013). *Institute of International Education*. Retrieved from <http://www.iie.org/en/Research-and-Publications/Open-Doors>.

- Pfeil, U., Zaphiris, P., & Ang, C. S. (2006). Cultural differences in collaborative authoring of Wikipedia. *Journal of Computer-Mediated Communication, 12*, 88-113.
- Rahim, M. A. (1983). *Rahim Organizational Conflict Inventories: Professional Manual*, Palo Alto, CA: Psychologists Press.
- Rahim, M. A. (2001). Referent role and styles of handling interpersonal conflict. *Journal of Social Psychology, 126*, 79-86.
- Rogers, E. M., Hart, W. B., & Miike, Y. (2002). Edward T. Hall and the history of intercultural communication: The United States and Japan. *Keio Communication Review, 24*, 3-26.
- Ruggiero, G. M., Stapinski, L., Caselli, G., Fiore, F., Gallucci, M., Sassaroli, S., & Rapee, R. M. (2012). Beliefs over control and meta-worry interact with the effect of intolerance of uncertainty on worry. *Personality and Individual Differences, 53*, 224-230.
- Smith, P. B., Dugan, S., Peterson, M. F., & Leung, K. (1998). Individualism/collectivism and the handling of disagreement: A 23 country study. *International Journal of Intercultural Relations, 22*, 351-367.
- Shah, A. (2012). Uncertainty avoidance index and its cultural/country implications relating to consumer behavior. *Journal of International Business Research, 11*, 119-134.
- Shupe, E. I. (2007). Clashing cultures: A model of international student conflict. *Journal of Cross-Cultural Psychology, 38*, 750-771.
- Sirivun, U. (2001). *An investigation of the primary and secondary conflict management style preferences of men and women in the role of local managers, international managers, and college students in Thailand*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI Number: 3006659).
- Sternhein, L., Startup, H., & Schmidt, U. (2011). An experimental exploration of behavioral and cognitive-emotional aspects of intolerance of uncertainty in eating disorder patients. *Journal of Anxiety Disorders, 25*, 806-812.
- Stewart, M. C. (2009). *Relationship between intolerance of uncertainty and eating disorder symptomatology in a mixed non-clinical, sub-clinical, and clinical eating disorder population*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI Number: 3378326).
- Sun, W., & Starosta, W. J. (2001). "Fact-to-fact or person-to-person"?: Expatriate Chinese consider conflict in US America. *World Communication, 30*, 22-44.
- The Hofstede Centre. Retrieved from <http://geert-hofstede.com/countries.html>.

- Ting-Toomey, S., & Oetzel, J. G. (2001). *Managing intercultural conflict effectively*. Thousand Oaks, CA: Sage.
- Ting-Toomey, S. (2009). Anxiety/uncertainty management theory. In S. W. Littlejohn, & K. A. Foss (Eds.), *Encyclopedia of communication theory* (Vol. 1, pp. 36-38). Thousand Oaks, CA: Sage.
- Ting-Toomey, S., Gao, G., Trubitsky, P., Yang, Z., Kim, H.S., Lin, S., & Nishida, T. (1991). Culture, face maintenance, and styles of handling interpersonal conflict: A study in five countries. *The International Journal of Conflict Management*, 2, 275-296.
- Ting-Toomey, S., & Oetzel, J. G. (2002). Cross-cultural face concerns and conflict styles: Current status and future directions. In W. B. Gudykunst, & B. Mody (Eds.), *Handbook of international and intercultural communication* (2<sup>nd</sup> ed., pp. 143-163). Thousand Oaks, CA: Sage.
- Tolin, D. F., Abramowitz, J. S., Brigidi, B. D., & Foa, E. B. (2003). Intolerance of uncertainty in obsessive-compulsive disorder. *Anxiety Disorders*, 17, 233-242.
- Torres, A., & Bligh, M. (2012). How far can I trust you? The impact of distance and cultural values on leaders' trustworthiness. *Journal of Leadership, Accountability and Ethics*, 9, 23-38.
- Trubitsky, P., Ting-Toomey, S., & Lin, S. (1991). The influence of individualism-collectivism and self-monitoring on conflict styles. *International Journal of Intercultural Relations*, 15, 65-84.
- Yang, Z. (2013). Psychometric properties of the Intolerance of Uncertainty Scale (IUS) in a Chinese-speaking population. *Behavioral and Cognitive Psychotherapy*, 41, 500-4.
- Wei, L., Willnat, L., & Shao, L. (2012). Cultural differences in the use of Web 1.0 and Web 2.0: A comparative analysis of Chinese and American Youth. *China Media Research*, 8, 77-89.
- Winbolt, B. (2010, March 29). How to deal with uncertainty. Retrieved from <http://www.barrywinbolt.com/2010/03/dealing-with-uncertainty> on June 18, 2013.
- White, R. G., & Gumley, A. I. (2009). Postpsychotic posttraumatic stress disorder: Associations with fear of recurrence and intolerance of uncertainty. *The Journal of Nervous and Mental Disease*, 197, 841-849.
- Works, C. G. (2008). *An analysis of the relationship between the conflict management styles of terminated pastors and selected contextual factors*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI Number: 3314612).

Zhang, X., Liang, X., & Sun, H. (2013). Individualism-collectivism, private benefits of control, and earnings management: A cross-culture comparison. *Journal of Business Ethics, 114*, 655-664.

**APPENDIX A**

## Survey Questionnaire

Please use the scale below to indicate to what extent you agree or disagree with the following statements. Please think of uncertainty as **THE DOUBTS WE HAVE ABOUT OUR ABILITY TO ACCURATELY PREDICT THE OUTCOME OF THE FUTURE EVENTS OR EXPLAIN WHAT HAPPENED IN THE PAST.**

1. Uncertainty stops me from having a firm opinion.
  - Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
  
2. Being uncertain means that a person is disorganized.
  - Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
  
3. Uncertainty makes life intolerable.
  - Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
  
4. It's unfair not having any guarantees in life.
  - Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
  
5. My mind can't be relaxed if I don't know what will happen tomorrow.
  - Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree

6. Uncertainty makes me uneasy, anxious, or stressed.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
7. Unforeseen events upset me greatly.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
8. It frustrates me not having all the information I need.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
9. Uncertainty keeps me from living a full life.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
10. One should always look ahead so as to avoid surprises.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
11. A small unforeseen event can spoil everything, even with the best planning.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree

12. When it's time to act, uncertainty paralyses me.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
13. Being uncertain means that I am not first rate.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
14. When I'm uncertain, I can't go forward.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
15. When I'm uncertain I can't function very well.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
16. Unlike me, others always seem to know where they are going with their lives.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
17. Uncertainty makes me vulnerable, unhappy, or sad.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree

18. I always want to know what the future has in store for me.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
19. I can't stand being taken by surprise.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
20. The smallest doubt can stop me from acting.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
21. I should be able to organize everything in advance.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
22. Being uncertain means that I lack confidence.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
23. I think it's unfair that other people seem sure about their future.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree

24. Uncertainty keeps me from sleeping soundly.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
25. I must get away from all uncertain situations.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
26. The ambiguities in life stress me.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree
27. I can't stand being undecided about my future.
- Strongly disagree
  - Disagree
  - About equally agree and disagree
  - Agree
  - Strongly agree

Please read the following hypothetical scenario and rate yourself on how true each of the statements will be of you in the situation described below.

A professor has assigned you to work with a fellow student on a class project. The professor has given the two of you the option of either submitting a paper or giving a presentation. You and your project partner disagree on which option to pursue. The professor does not allow to switch the project partner once the class project begins. What will you do in a situation such as this? How will you resolve the conflict with your partner?

Please rate yourself twice: (1) imagine that your project partner is a fellow student from the U.S. and provide your responses in drop-down menu 1 (2) imagine that your project partner is a fellow student from your native country and provide your responses in drop-down menu 2.

1. I will try to investigate an issue with my project partner to find a solution acceptable to both of us.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

2. I will try to satisfy the needs of my project partner and accept his/her choice of project format.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

3. I will try to keep my conflict to myself and accept my project partner's choice of format to complete the class project.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

4. I will try to integrate my ideas with those of my project partner to come up with a decision jointly.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

5. I will try to work with my project partner to find solution to a problem, which satisfy our expectations.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

6. I will try to avoid open discussion of the conflict situation with my project partner.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

7. I try to find middle course to resolve the disagreement with my project partner.

	Fellow student from the	Fellow student from your

	U.S.	country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

8. I will use my influence to get my preference for the format of class project accepted.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

9. I will use my authority to make a decision about project format in my favor.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

10. I will try to accommodate the wishes of my project partner.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		

Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

11. I will give in to the wishes of my project partner.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

12. I exchange accurate information with my project partner to solve a problem together.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

13. I will allow concessions to my project partner.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		

True of me most of the time		
True of me		

14. I will propose a middle ground for breaking the deadlock with my project partner.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

15. I will negotiate with my project partner so that a compromise can be reached.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

16. I will try to stay away from disagreement with my project partner.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

17. I will avoid any encounter with my project partner.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

18. I will use my expertise to make a decision about class project in my favor.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

19. I will go along with the suggestions of my project partner.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

20. I will attempt to use “give and take” so that a compromise can be made with my project partner.

	Fellow student from the U.S.	Fellow student from your country

Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

21. I will be firm in pursuing my side of the issue with my project partner.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

22. I will openly discuss all my concerns about the class project with my project partner and ask him/her to voice all of his/her concerns so that the issue can be resolved in the best possible way.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

23. I will collaborate with my project partner to come up with a decision about class project acceptable to both of us.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		

Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

24. I will try to satisfy the expectations of my project partner for the choice of format for the class project.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

25. I will use my power to win a competitive situation like choosing a format for presentation of the class project.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

26. I will try to keep my disagreement with my project partner to myself in order to avoid hard feelings.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the		

time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

27. I will try to avoid unpleasant exchanges with my project partner about the class project. I will try to avoid encounters which one or both of us find unpleasant.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

28. I will try to work with my project partner for a proper understanding of a problem.

	Fellow student from the U.S.	Fellow student from your country
Untrue of me		
Untrue of me most of the time		
Approximately half the time untrue of me and approximately half the time true of me		
True of me most of the time		
True of me		

### Demographics Questionnaire

1. Age (example: 19) \_\_\_\_\_

2. Sex (please check one) Male \_\_\_\_\_ Female \_\_\_\_\_

3. Academic standing (Please check one of the items below)

Undergraduate \_\_\_  
 Graduate (MA/Ms/MBA) \_\_\_  
 Graduate (PhD) \_\_\_  
 Other \_\_\_

4. Class rank (if undergrad, example: sophomore;  
 if grad, example: second year) \_\_\_\_\_

5. Which country are you from? (example: France) \_\_\_\_\_

6. Duration of stay in the US during current visit in months and years  
 (example: 2 years and 8 months) \_\_\_\_\_

7. Number of trips abroad in the past, including current stay in the US (example: 4) \_\_\_\_\_

8. Total duration of stay abroad during all foreign travels including current stay  
 in the US in months and years (example: 5 years and 4 months) \_\_\_\_\_

9. Please indicate the number of languages you speak and the level of proficiency  
 (please type in the language and choose the appropriate level of proficiency for each  
 of the languages)

_____	Native ___	Fluent ___	Intermediate ___	Beginner ___
_____	Native ___	Fluent ___	Intermediate ___	Beginner ___
_____	Native ___	Fluent ___	Intermediate ___	Beginner ___
_____	Native ___	Fluent ___	Intermediate ___	Beginner ___
_____	Native ___	Fluent ___	Intermediate ___	Beginner ___

Thank you for participating in this study!

If you have any questions or concerns after completion of the survey, you can discuss them with principal researcher, Yekaterina Syrtsova (yvsyrtso@uark.edu). If you are having negative thoughts or feelings, please feel free to contact the Counseling and Psychological Services (CAPS) (Pat Walker Health Center, 24/7 emergency phone: 575.5276).

If you wish to enter a drawing for \$25 Visa gift card, please leave your email in the comment box below. Please leave a working email address that you check regularly. It will be used to contact the winner.

Please provide any comments in the box below.

## APPENDIX B

### Informed Consent Form

**Researcher:**

Yekaterina Syrtsova  
 Faculty Advisor: Lynne M. Webb, PhD  
 University of Arkansas  
 Fulbright College of Arts and Sciences  
 Department of Communication  
 417 Kimpel Hall  
 Fayetteville, AR 72701  
 479-249-4200

**Compliance Contact Person:**

Ro Windwalker, CIP  
 IRB Coordinator  
 Office of Research Compliance  
 210 Administration Building  
 University of Arkansas  
 Fayetteville, AR 72701  
 479-575-2208  
 irb@uark.edu

*Description:* This study is designed to investigate how cultural differences impact the way people manage conflict. If you agree to participate in this study, you will be asked to complete a survey.

*Benefits of participation:* The benefits of this study include contributing to knowledge of how cultural distance impacts conflict management in intercultural and intracultural settings. The results of this study will contribute to the fields of interpersonal communication and conflict management. In addition, you may gain a deeper understanding of yourself and the way you manage uncertainties and conflict in your life as a result of reflection prompted by completion of the survey. Upon completion of the survey, you will be provided the opportunity to enter a lottery for a \$25 Visa gift card.

*Risks:* Due to personal nature on inquiries, some of the questions may arouse negative thoughts or feelings. If you have any questions or concerns after completion of the survey, you can discuss them with principal researcher, Yekaterina Syrtsova ([yvsyrtso@uark.edu](mailto:yvsyrtso@uark.edu)). If you are having negative thoughts or feelings, please feel free to contact the Counseling and Psychological Services (CAPS) at the Pat Walker Health Center (24/7 emergency phone: 479.575.5276).

*Voluntary Participation:* Your participation is completely voluntary, and you may skip any question that you do not want to answer.

*Right to Withdraw:* You are free to refuse to participate in the research and to withdraw from this study at any time. Your decision to withdraw will bring no negative consequences – no penalty to you.

*Confidentiality:* All responses will be kept confidential to the extent allowed by law and University policy. Your name is not required on the survey. If at any time you would like to see how your information has been used, please contact the principal researcher, Yekaterina Syrtsova ([yvsyrtso@uark.edu](mailto:yvsyrtso@uark.edu)).

*Informed consent:* I have read the description, including the purpose of the study, the procedures to be used, the potential risks and benefits, the confidentiality and voluntary participation, as well as the option to withdraw from the study at any time. My participation in this study indicates that I agree for my responses to be used in this research study.

## APPENDIX C

September 16, 2013

## MEMORANDUM

TO: Yekaterina Syrtsova  
Lynne Webb

FROM: Ro Windwalker  
IRB Coordinator

RE: New Protocol Approval

IRB Protocol #: 13-08-060

Protocol Title: *The Impact of Uncertainty Avoidance and Androgyny on Intercultural and Intracultural Conflict Management*

Review Type:  EXEMPT  EXPEDITED  FULL IRB

Approved Project Period: Start Date: 09/16/2013 Expiration Date: 09/11/2014

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Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (<http://vpred.uark.edu/210.php>). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

**This protocol has been approved for 200 participants.** If you wish to make *any* modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 210 Administration Building, 5-2208, or [irb@uark.edu](mailto:irb@uark.edu).

**APPENDIX D**

## Letter of Invitation

Dear International Student,

My name is Yekaterina Syrtsova and I am a graduate student in the Department of Communication, University of Arkansas. I am working on a thesis project and I am studying how cultural differences impact the way people manage conflict in their daily lives. I would be very grateful if you would complete the survey. This questionnaire will take about 15 minutes to complete. Some of the questions might be somewhat uncomfortable; however it is important to be as honest as possible. Please follow this link to the survey or copy and paste the URL below into your internet browser: <https://www.surveymonkey.com/s/QS5K8J2>. After completing the survey, you will have the opportunity to enter in a drawing to win a \$25 gift card for completion of the survey.

Thank you,  
Yekaterina

## APPENDIX E

Table 3. Paired Samples T-tests (ROCI-II scale).

Paired Samples Test									
Pair	Item	Paired Differences					t	df	Sig. (2-tail.)
		Mean	SD	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
1	22	.23495	.72409	.06666	.10294	.36696	3.525	117	.001
2	28	.025	.480	.044	-.062	.113	.576	117	.566
3	27	.078	.724	.067	-.056	.211	1.154	115	.251
4	26	.017	.692	.064	-.109	.143	.266	117	.791
5	25	.034	.642	.059	-.083	.152	.576	116	.566
6	24	.043	.464	.043	-.042	.128	1.000	115	.319
7	23	.151	.577	.053	.047	.256	2.860	118	.005
8	21	.153	.594	.055	.044	.261	2.791	117	.006
9	20	.067	.733	.067	-.066	.200	1.000	118	.319
10	19	-.085	.674	.062	-.208	.038	-1.366	117	.175
11	19	.076	.542	.050	-.022	.175	1.530	117	.129
12	17	-.008	.577	.053	-.114	.097	-.159	117	.874
13	16	-.059	.731	.067	-.193	.074	-.881	117	.380
14	15	.034	.712	.065	-.096	.163	.515	118	.608
15	14	.144	.543	.050	.045	.243	2.880	117	.005
16	13	-.025	.530	.049	-.122	.071	-.521	117	.604
17	12	.034	.410	.038	-.041	.108	.894	118	.373
18	11	-.008	.783	.071	-.150	.133	-.117	119	.907
19	10	.083	.681	.062	-.040	.206	1.341	119	.183
20	9	.074	.594	.054	-.033	.181	1.378	120	.171
21	8	.101	.785	.072	-.042	.243	1.401	118	.164
22	7	.102	.744	.068	-.034	.237	1.485	117	.140
23	6	-.074	.787	.072	-.216	.067	-1.040	120	.301
24	5	.092	.565	.052	-.010	.194	1.777	119	.078
25	4	.144	.754	.069	.007	.282	2.075	117	.040
26	3	.475	2.371	.215	.050	.900	2.214	121	.029
27	2	.042	.509	.046	-.050	.134	.897	119	.371
28	1	.298	.954	.086	.129	.468	3.483	123	.001