Ostracism During Cross-Cultural Adaptation: Can Acculturation Strategy Buffer the Experience of Ostracism?

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Ostracism During Cross-Cultural Adaptation: Can Acculturation Strategy Buffer the Experience of Ostracism?

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Last but not least, I want to thank my family for their endless love and support.
Abstract

Socially adapting to a new country and culture can be challenging for international students. To adjust to the dominant culture international students may use one or more acculturation strategies. Individuals using separation maintain their identification with original culture, while those using assimilation or integration strive to belong to their host culture. The current research investigates whether the type of acculturation strategies international students adopt can influence their experience of social rejection. Unexpectedly, acculturation strategies did not affect social rejection when facing ostracism by a host culture member. However, the researcher found that individuals’ reactions to ostracism experience were significantly related to their age and duration in the host country.
Ostracism During Cross-Cultural Adaptation: Can Acculturation Strategy Buffer the Experience of Ostracism?

International students comprise a large subset of the population of many American universities. More than 2 million international students choose the United States to pursue higher education according to Organization for Economic Co-operation and Development’s statistics (OECD, 2010). Humans have a strong desire for social affiliation and have a need to socially bond with others (Gonsalkorale & Williams, 2007). Thus, it is important to study international students’ adaptation process and any difficulties they may have during this process.

Students from other countries need to make new social connections with individuals in their host country. Yet, international students often have different social and cultural norms from individuals in their new host countries. The social and cultural adaption to a new country including the U.S. can be a great personal challenge (Bertram, Poulakis, Elsasser, & Kumar, 2014), as one may encounter problems adapting to new cultural norms (Rajab, Rahman, Panatik, & Mansor, 2014). Researchers have found that international students often experience higher levels of adjustment difficulties, (Bertram et al, 2014) and are more likely to experience social exclusion when encountering large differences in social and cultural norms between their home and host countries (Wirth & Williams, 2009).

Cross-cultural Adaption

How do international students adapt to a new culture? Research on the cross-cultural adaptation began in the early 20th century due to an increasing number of newcomers to the U.S
(Padilla & Perez, 2003). Today, several models attempt to explain the process of cross-cultural adaptation to a new country. The fundamental idea behind all these models is that individuals seek to minimize social and cultural differences between home and host cultures (Perez, Voelz, Pettit, & Joiner, 2002). Presently, the most empirically supported model is Berry’s model of acculturation (Padilla & Perez, 2003). Berry (2005) defined acculturation as “a dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members” (p. 698). The acculturation process involves changes in a person’s behavioral repertoire through a long-term process of learning and adapting to one’s host culture, including learning a new language, popular food preferences, new forms of dress, and social norms (Berry, 2005).

**Acculturation Strategies**

Berry (2005) proposed that as individuals from a minority culture group go through various adaptive learning process, they often choose various strategies to aid their acculturation process to the new culture. Berry has proposed four basic acculturation strategies: assimilation, integration, separation, and marginalization. These strategies include two components: an individual’s preference about how to acculturate and a person’s actual activities (Berry, 2005).

**Assimilation** is the process in which individuals strive to become more similar to the dominant cultural group and do not wish to maintain their own cultural identity. Individuals using assimilation strategies tend to reject their heritage and culture and seek to become a member of the dominant society. **Integration** involves the individual keeping their cultural
identity and while also moving to join the dominant culture. *Separation* is where individuals place a value on holding on to their original culture and seek to avoid or minimize interaction with others from the host country. The strategy of *marginalization* describes those individuals that have little interest in both their original and dominant host cultures (Berry, 2005).

Berry (2005) argued that the strategy of integration is the least stressful and marginalization is the most stressful for people adapting to a new culture; in between are assimilation and separation. Zagefka and Brown (2002) examined the impact of these individual acculturation strategy preferences and found that the strategy of integration was associated with more favorable intergroup relations, and marginalization yielded the worst outcome (i.e. poor well-being). Yu and Wang (2011) studied the preferences in acculturation strategies among Chinese students in Germany and found that both integration and separation strategies produced favorable outcomes because maintaining one’s heritage culture seemed to be a protective factor for one’s psychological well-being. Other research has shown some sex differences in strategies. For example, male students preferred the strategy of separation while female students predominantly choose integration (Yu & Wang, 2011).

**International Students’ Acculturation Difficulties in the US**

During the cross-culture adaptation, international students may experience acculturation stress, which is rooted in the experience of adaptation and come from cultural conflicts and caused by differences between cultures (Berry, 2005). The cultural conflicts for international students may come from language barriers, academic stress, the sociocultural stressors (e.g.
different culture), discrimination, financial problems (e.g., higher tuition fees), work restrictions, transportation, and accommodation satisfaction (Smish & Khawaja, 2011). International students failing to adjust to new and challenging cultural demands may experience higher levels of loneliness, depression, and increased physical and mental health problems (Furukawa, 1993; Berry, 2005, Kroon, Tartakovsly, Stachon, Pettit, & Perez, 2014).

International students may experience difficulties to acculturate to the academic and social differences they experience within an American classroom (Yeh & Inose, 2003). Often, international students from non-English-speaking countries experience difficulties inadequate communications to others in writing and discussion in the classroom (Bertram et al, 2014). For example, Mori (2000) found that simply studying the second language in a new country can negatively affect one’s cultural adaptation. Bertram et al. (2014) suggested that using a new language in an American classroom setting may negatively impact international students’ abilities of writing assignments, listening to lectures, and expressing one’s thoughts. Also, the educational system from other countries may be in contrast to the more interactive and critical thinking emphasis in the United States (Yeh & Inose, 2003).

Discrimination and perceived prejudice from others are also concerns for international students’ acculturation process. Two-thirds of international students reported that they had experienced loneliness and social isolation in their host country, particularly in the beginning months of their stay (Smish & Khawaja, 2011). Also, international students often report they experience some discrimination in their interactions with faculty, staff, other students, and with
members of campus (Hanassab, 2006). In the near past, international students from the Middle East experienced more difficulty regarding stereotyping and discrimination in the U.S. as a result of the September 11 terrorist attack (Hanassab, 2006).

**Ostracism Experiences**

As mentioned, a negative aspect of acculturation stress is that it can lead to one feeling socially isolated. Recently, a considerable amount of research has been conducted to examine the effects of social isolation and rejection. Ostracism is defined as being socially excluded and ignored, which has a powerful, immediate effect on individuals (Zadro, Williams, Richardson, 2004). For example, Williams (2009) found that people who have been ostracized for just a few minutes report feeling distress, anger, sadness, a decreasing feeling of belonging to society, diminished self-esteem, and a lack of meaning in their life. A body of evidence suggests that humans may have a built-in brain mechanism that automatically perceives, and feels pain to social exclusion (Gonsalkorale & Williams, 2007). In an fMRI study, participants experiencing ostracism were found to have increased activation in the anterior cingulate cortex, a brain region that is associated with the experience of physical pain (Eisenberger, Lieberman, & Williams, 2003). Buelow, Okdie, Brunell, & Trost, (2015) also found that ostracism can impair individuals working memory, decision-making, and task persistence. Gonsalkorale and Williams (2007) found that ostracism, even by a despised outgroup, hurts.

Williams (2009) theorized that individuals respond to ostracizing events in three stages. In the *reflexive* stage, individuals experience ostracism and significant threats for four fundamental
psychological needs: belonging (forming lasting social relationships), self-esteem, control of life, and the meaningful existence of one’s life (Buelow et al., 2015). In the reflective stage, time heals the pain of ostracism for most people (Goodwin, Williams, & Carter-Sowell, 2010). Here ostracism’s effects begin to diminish, but some negative effects remain longer than a few minutes and can negatively influence executive function (Buelow et al., 2015). During the Resignation stage, individuals become somewhat resigned to their ostracized state (Buelow et al., 2015). Researchers have found that individuals who have social anxiety did not rebound from ostracism as fully as individuals not socially anxious (Zadro, Boland, & Richardson, 2006). Additionally, in several ostracism types of research (Zadro, Williams, Richardson, 2004; Williams, 2009; Buelow et al., 2015; Eisenberger, Lieberman, & Williams, 2003), participants reported feeling less distress within a few minutes. However, in Goodwin, Williams, and Carter-Sowell (2010) study, participants attributed ostracism to racial prejudice, which impeded their recovery.

**International students and Ostracism**

International students faced many environmental and interpersonal challenges in the United States and other western countries (Houshmand et al, 2014). As mentioned, international students are often stereotyped by their American classmates and other members of the college community (Hanasssab, 2006), and these stereotypes, can at times be stigmatizing (Wirth & William, 2009). For example, Chinese students are stereotyped as being good at math and science; there are assumptions that Indian students are not allowed to partake in social activities and this hinders their participation in a campus events. Empirical research has documented that international
students often are marginalized and ignored on campus (Diangelo, 2006). Several studies have shown that Asian international students are often excluded and avoided by others on U.S. campuses (Constantine et al., 2005; Houshmand, Spanierman, and Tafarodi, 2014).

During adaptation process, the strategies that international students used may have some effects on their reaction to the ostracism experience. It has been found that possessing an ethnic group membership while ostracized may incur both costs (e.g., increased sensitivity to social rejection) and benefits (e.g., attributional ambiguity) for an individual (Goodwin, Williams, & Carter-Sowell, 2010). Specifically, an individual often feels greater harm after experiencing ostracism when he/she attribute a negative outcome to prejudice or discrimination (Wirth & Williams, 2009). In contrast, one might not feel as bad after the ostracism experience if the group membership is only temporary, because he/she might think the ostracism is due to the specific membership and not “personal” and the rejection will pass (Wirth & Williams, 2009).

In Wirth and Williams’ (2009) study, participants were ostracized or included during Cyberball game, a virtual online ball-tossing game, and were randomly assigned to a temporary, permanent or no membership group. The results indicate that there are recovery differences regarding social anxiety that are attributable to group membership. Also, possessing a temporary group membership resulted in quicker recovery compared to possessing a permanent group membership.

Some studies of ostracism examined the effect of the racial and ethnic groups because racial and ethnic groups represent permanent memberships. In Goodwin, Williams, and Carter-Sowell
(2010) study, White and African Americans were recruited in an ostracism experience. They were asked about their racial and ethnic identities for increasing the salience of group identities. Then, participants in this study were either ostracized or included by Cyberball game and randomly assigned to two ostracism groups by two fake tossers (both White or both Black). Results indicate that ostracism of African American participants is comparatively more threatening than ostracism of Whites participants. Researchers found that White participants attributed ostracism to racism only when other players were Black, but Black participants attributed ostracism to racism when other players were White or Black, because race-based prejudice may intensify the experience of ostracism when it occurs (Goodwin, Williams, and Carter-Sowell, 2010).

The Current Study

In summary, it is critical to understand international student’s ostracism experience during cross-cultural adaptation. Possessing a group membership can a time be self-protective, while at other times psychologically harmful when experiencing social ostracism, depending on one’s specific group identification (Crocker & Major, 1989; Schmitt & Branscombe, 2002a). In the current study, I hypothesize that international students’ may respond differently to ostracism depending on the acculturation strategy they have adopted to cope with the new cultural and social demands of their host country (i.e., the U.S.). This will be significant for students who used separation strategies as they may identify themselves as a member of their home country after the ostracism experience. People who used assimilation and integration strategies may
identify themselves as members of the host country (i.e. the U.S) after ostracism experience.

I hypothesize that international students using the acculturation strategies of integration and assimilation will score significantly lower on self-reported self-esteem, belonging, personal control, and meaningful life existence when ostracized by two American students than international participant students who use separation or marginalization acculturation strategies.

In sum, I propose that when facing ostracism by host culture members, an acculturation strategy of separation/marginalization will buffer the effects of social rejection by individuals from their host culture.

Method

Participants

The sample used in this study included 50 male and female international students from Marietta College. Participant ages ranged from 18 to 30 years old. Participants were recruited from ESL class and from posted flyers around the Marietta College campus inviting international students to participate in the study. Participants from ESL class received 20 bonus points toward their course grad and each participant was paid two dollars for their participation. The data was collected on the Marietta College campus in the Mills Hall 4th floor Psychology Department human subject research lab.

Procedures and Materials

All participants signed an informed consent form (see Appendix A) and completed a demographic questionnaire asking participants’ citizenship, gender, marital status, age, major,
and length of residence in the U.S. (see Appendix B).

As a cover story, participants were informed that the purpose of this research study was to understand mental visualization as it applied to the video games during international student’s acculturation process and they would play an online ball toss game with two randomly selected individuals from Marietta College.

The East Asian Acculturation Measure (EAAM)

Participants completed the East Asian Acculturation Measure (EAAM) (Barry, 2001). The EAAM (see Appendix C) is a 29-item self-report inventory to measure individual’s acculturation strategies. Based on Berry’s model (2005), the EAAM includes measures of assimilation (8 items), separation (7 items), integration (5 items), and marginalization (9 items) (see Appendix A). Items are scored using a 7-point Likert-type scale (i.e., from strongly disagree to agree strongly). The higher scores in each subscale indicate higher levels on that particular strategy. The EAAM inventory has been used in several studies (see Barry & Grilo, 2003; Barry, & Grilo, 2002). Barry and Grilo (2003) suggest that the EAAM has adequate reliability (alphas ranged from .74 to .85) and is a useful tool for clinicians and researchers to investigate the acculturation strategy of East Asian immigrants. Examples of items in each of the sub-scale are: “I get along better with American than Asian” (assimilation); “I prefer going to social gatherings where most people are Asian” (separation); “I feel very comfortable around both Americans and Asian” (integration) and “Sometimes I feel that Asian and Americans do not accept me” (marginalization).
Based on EAAM score participants were divided into two groups: integration/assimilation group, and assimilation/marginalization group. As in the Yu and Wang (2011) study, a mean score was calculated for each participant on each of four acculturation strategies. Then, participants’ mean scores were used to compute the overall score for each acculturation strategy. The highest percentage of mean scores of each strategy and overall score indicate the acculturation strategy participants use.

**Ostracism using a Cyber-ball game**

Cyberball is a virtual ball-toss game that depicts three ball-tossers, the middle one representing the participant. When the ball is tossed to the participants’ icon, they are instructed to click on one of the other two icons to indicate their intended recipient, and the ball moves toward the selected icon of other players (Gonsalkorale & Williams, 2007). In the current study, all participants will receive the ball twice at the beginning of the game, but then never receive the ball again.

Participants in both integration/assimilation group and assimilation/marginalization group were randomly assigned to one of two conditions: an out-group ostracism condition and an in-group ostracism condition. In the out-group condition, the participant played cyber ball with two online gamers (with typical American names). In the in-group conditions, the participant played cyber ball with two online gamers (with typical Chinese name or Arabic name).

**A standard post-experimental questionnaire of Ostracism**

After finishing the game, participants completed a standard post-experimental questionnaire
(see Appendix D) that has been used in previous cyber-ostracism research to measure several dimensions of the experience of social rejection in the reflexive stage of ostracism (Zadro, Boland, & Richardson, 2006). The questionnaire (see Appendix D) includes a manipulation check for ostracism experience and some questions that asked participants to assess levels of four needs that they felt during the game (Zadro, Williams, & Richardson, 2004). For example, participants were instructed to indicate how they feel during the game, such as belonging (e.g., “I felt like an outsider”), self-esteem (e.g., “I felt good about myself”), control (e.g., “I felt like I had control over the course of the interaction”), and meaning Existence (e.g., “I felt non-existent”) (Goodwin, Williams, & Carter-Sowell, 2010). All questions were rated on 9-point scales (Zadro, Williams, & Richardson, 2004). This measure of ostracism has been found by past researchers to have adequate reliability (Cronbach’s alpha coefficients for each need were: belonging .74; control .72; self-esteem .70; and meaningful existence .66 (Zadro, Williams, & Richardson, 2004).

After the participants indicated they finished the questionnaire, the researcher asked participants about their thoughts and feelings during the study. The researcher performed a verbal manipulation check by asking participants whether they had played the game with a university student or computer player (Wirth & Williams, 2009) and if they had played this game before, their data will not be used in this study. If players were familiar with cyberball or were suspicious about the study, their data was not used in this study.

Finally, participants were given a debriefing statement (see Appendix E).
Results

Participants Data

Of the total 50 international student participants recruited from Marietta College, thirty-one (62.0 %) participants used an integration strategy; fourteen (28 %) participants used a separation strategy, and five (10 %) participants used a marginalization strategy. The assimilation strategy was not used by any participant. Twenty-nine (58%) participants came from China, sixteen participants (32%) came from Kuwait, and five (10%) participants came from the nation of the Congo.

Acculturation strategies and Ostracism experiences

In this 2 (acculturation strategies: integration/marginalization, assimilation/separation) x 2 (ostracism condition: out-group, in-group) factorial study were analyzed using a multivariate analysis of variance (MANOVA). The alpha level for analyses will be set at .05. Between-groups differences in the dependent variables of satisfaction on needs of belonging, self-esteem, control, and meaningful life existence were analyzed using a multivariate analysis of variance (MANOVA). Measure of effect size were reported as eta-squared, in which $\eta^2 = .01$ indicates a small effect size, $\eta^2 = .06$, represents a medium effect size, and $\eta^2 = .014$ means a large effect size.

The major research question for this study in investigated whether the acculturation strategies of international student would be able to buffer the negative experiences of ostracism. The hypothesis concerning when facing ostracism by host culture members, an acculturation
strategy of separation or marginalization will buffer the effects of social rejection by individuals from host culture was not supported, $F (15, 116) = .56$, $p = .90$, Wilk's $\Lambda = 0.82$, $\eta^2 = .062$.

**Correlation**

I did find a significant relationship between participants’ assimilation score and their fundamental needs of control after ostracism, $r(49) = -.33$, $p = .02$, which likely means that participants who have higher assimilation score reported greater feelings of control during the ostracism experience (see Figure 8).

There was a significant relationship between participants’ age and the fundamental needs of self-esteem after ostracism, $r(49) = .43$, $p = .002$, which means participants who are older tended to reported maintaining their self-esteem after their ostracism experience (see Figure 6).

A significant relationship between duration in the U.S. and the fundamental needs of self-esteem after ostracism was found in this study, $r(49) = .36$, $p = .03$, suggested that the longer participants stayed in the U.S., the more likely they can maintain their self-esteem after ostracism experience (see Figure 7).

**Discussion**

This research examined whether acculturation strategies used by international students would influence their ostracism experience in the U.S. Both the acculturation process and experiences of discrimination of international students have been well researched. However, the current study is one of the first to attempt to examine the relationship between international students’ ostracism experience and the acculturation strategy they use to cope with their host
environment during their cross-cultural adaptation process.

Unfortunately, the foundational supposition of this investigation, that international students who use separation or marginalization strategies would feel somewhat better when rejected by people from the host country, was not supported by the results of this research.

I found no relationship between acculturation strategies and participants’ ostracism experience, which means no matter what strategies international students used they tend to have similar reactions to ostracism. International students felt hurt on both in-group ostracism and out-group ostracism. Also, there are no significant differences in the reaction after ostracism between international students who use assimilation/integration strategies and international students who use separation/marginalization strategies.

Although the primary hypothesis of the current was not supported by the results, some variables did seem to mediate on international students’ ostracism experiences. For example, the findings suggested that international students who are older tended to maintain their self-esteem after the ostracism experience. Also, the longer international students stay in the U.S., the more likely they can retain their self-esteem after the ostracism experience. These findings suggest that the older students may be better to deal with adapting to the stressors of lives in a foreign environment. Few studies found the relationship between age and cross-adaptation, but some studies found that age at time of immigration is related to cross-adaptation (Salant, Lauderdale, 2003). Salant and Lauderdale (2003) suggest that the duration of residence is likely to relate differently to acculturation depending on whether the immigrant arrived as an adult or as
children. One possible explanation is that those who immigrated as children resemble the native-born and have an easier time to connect with people in the host country (Chen, Unger, Cruz, & Johnson, 1999).

The findings of the current study also suggest that the longer duration of residence in the U.S enables international students to gain more cultural insights. Other studies also found the relationship between the length of residence and the cross-cultural adaptation. For example, Lay and Nguyen (1998) found that the number of years since immigrating to Canada was negatively related to international students’ depression. This finding suggests that the duration of residence can be a protective factor during cross-cultural adaptation. Some studies also found that the duration of stay is related to immigrants’ physical health (Bennett, 1993; Frisbie, Cho, & Hummer, 2001). One possible explanation of these findings is that time of residence increase social interaction and communication, which in turn lead to improved connection skills and ability to navigate the new society (Salant, Lauderdale, 2003). However, there may be differences between long term immigrants and short term international college students in terms of adapting to a new culture.

Limitation

There were some limitations in the current study. Marietta College does not have a large pool of international students and only fifty participants were used in this study, with participants coming from only three different home countries, the majority being from China. The small sample may decreased the representativeness of international students. In the future, increasing
the number of participants would provide a more robust test of the hypothesis.

A second limitation of this study was the participants’ ability to understand the English language. Some participants reported difficulty answering some questions on the survey, although they were free to use mobile phone dictionaries, or ask the researchers to define any unknown words. For example, some participants asked the meaning of “frustrated” and “inadequate” when they completed the questionnaires. This difficulty could be overcome by translating questionnaires to participants’ home languages.

**Future research**

The results suggest that individuals’ reactions to ostracism experience were significantly related to their age and duration in the host country, but not related to their acculturation strategies. These findings should be given more attention by researchers in the future. The researchers may examine whether the international students’ ostracism experience is related to other variables, for example, trait anxiety or loneliness (Wirth & Williams, 2009). Some research suggests that individuals’ reaction to ostracism experience is related to trait anxiety. Furthermore, some studies have found that loneliness is related to international students’ well-being during cross-cultural adaptation (Neto, 2002; Tartakovsky, 2009), yet the relationship between self-reports of well-being and the influence it has on the acculturation process is unclear and calls for additional study.

Another area for further study is in the area of attributional differences to ostracism. During the debriefing it appeared that when participants were ostracized by individuals from their home
countries (e.g. China, Kuwait, and Congo), some blamed themselves (e.g. “I am not good at throwing the ball”), while others blamed the other player (e.g. “they are jerks”). When ostracized by individuals from the U.S, some of them tended to find an external explanation (e.g. “maybe they think I look different from them”). Future researchers may wish to investigate these attributional differences to explaining social rejection.

**Conclusion**

In summary, acculturation strategies did not affect social rejection when facing ostracism by a host culture member. However, the current study found that individuals’ reactions to ostracism experience were significantly related to their age and duration in the host country. Specifically, there was a significant relationship between participants’ age and the fundamental needs of self-esteem after ostracism. A significant relationship between duration in the U.S. and the fundamental needs of self-esteem after ostracism was found in this study. The researcher also found a significant relationship between participants’ assimilation score and their fundamental needs of control after ostracism.
References


Pitts, M. J. (2009). Identity and the role of expectations, stress, and talk in short-term student
Ostracism and Cross Cultural Adaption


Appendix A

Informed Consent Document

Project Title: The Mental Visualization Ability during Acculturation Process
Principal Investigator: Siyun Ai, sa005@marietta.edu (740-629-4009)
Faculty Advisor: Dr. Mark Sibicky, sibickym@marietta.edu

What is the purpose of the study? The purpose of this research study is to understand mental visualization as it applied to the video games during international student’s acculturation process. This study is my master thesis in Marietta College and has been approved by the Marietta College Human Subjects Committee.

Who will take part in this study? The sample used in this study will include approximately 50 male and female international students from Marietta College. Participants’ ages will range from 18 to 30 years old. Participants will be recruited from ESL course. The researcher will also post flyers around Marietta College inviting international students to participate for the study. Participants from ESL class will receive 20 bonus points for their course. Each participant will be paid two dollars. The data will be collected on the Marietta College campus in the Mills Hall 4th floor Psychology department human subjects research lab. This study will last 30 minutes. If you feel that you cannot continue with the study you are free to leave at any time without consequences.

What will happen if I take part in this study? After you read this informed consent, you will be asked to complete a questionnaire that tests your acculturation strategy. Then, you will play an online ball toss -game with other two randomly selected individuals from Marietta College, and then be asked to complete a questionnaire about your feelings during the study.

What are the possible risks/ benefits from participating in this study? In the current study, some people may experience mild distress playing the game or answering some of the questionnaires. Past researchers have found that these feelings are mild and usually temporary. If you feel uncomfortable at any time during the experiment, you may choose to withdraw completely from the study without no penalty. One benefit of the study is that the experimenter will explain more about our psychological research on the topic after you finish the study.

How will your privacy be protected? The researcher will make every effort to protect your privacy by assigning your responses to the questionnaires a code number. The code number will not be connected in any way with your name and therefore your responses to questionnaires and your performances are confidential and will only be known by the researcher running the session. All information collected in this study will also be pooled together and reported as group data, not your individual information. All data collected will only be used for scientific research purposes and will be kept in a locked cabinet in the psychology lab for 5 years, then it will be destroyed.

Participant’s Agreement: By signing my name below it indicates that I have read the information provided above. I have asked all the questions that I have at this time and had them answered to my satisfaction. I voluntarily agree to participate in this research study. I understand that I may withdraw at any time without penalty. If I have further questions or concerns about this study and
its results, I may contact Siyun Ai (sa005@marietta.edu, 740-629-4009) or Dr. Mark Sibicky (sibickym@marietta.edu). If I have further questions or concerns about research participant rights, I may contact the Marietta College Human Subjects Chairperson Jaclyn Schwieterman at sj004@marietta.edu. If you agree please sign below

Participant’s Name (Printed):__________________________________________________________

Participant’s Signature:______________________________________________________________

Date: ________________________________

Your college email address:__________________________________________________________
Appendix B

Demographic Sheet

Project Title: Acculturation strategy test and mental visualization study
Principal Investigator: Siyun Ai, sa005@marietta.edu

Please complete the following information
1. Gender (Check one): _____Female   _____Male   _____ Transgender
2. Age: __________
3. Class standing (Check one): First year___ Sophomore___ Junior___ Senior___
4. Where were you born? ______________
5. Where did you grow up? ______________
6. How long have you stayed in the U.S.? ______________

Appendix C

Revised East Asian Acculturation Measure (EAAM)

Instruction: The questions that follow refer to different ways of experiencing life in the United States. Please, read them carefully.

1 I write better in English than in my native language (for example, Chinese)
1…………...2…………..3…………..4…………..5…………..6…………...7
(Disagree)                                                 (Agree)

2 Most of the music I listen to is Asian
1…………...2…………..3…………..4…………..5…………..6…………...7
(Disagree)                                                 (Agree)

3 I tell jokes both in English and in my native language (for example, Chinese)
1…………...2…………..3…………..4…………..5…………..6…………...7
(Disagree)                                                 (Agree)

4 Generally, I find it difficult to socialize with anybody, Asian or American
1…………...2…………..3…………..4…………..5…………..6…………...7
(Disagree)                                                 (Agree)

5 When I am in my apartment/house, I typically speak English
1…………...2…………..3…………..4…………..5…………..6…………...7
(Disagree)                                                 (Agree)

6 My closest friends are Asian
1…………...2…………..3…………..4…………..5…………..6…………...7
(Disagree)                                                 (Agree)

7 I think as well in English as I do in my native language (for example, Chinese)
1…………...2…………..3…………..4…………..5…………..6…………...7
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<tbody>
<tr>
<td>8</td>
<td>I sometimes feel that neither Americans nor Asians like me</td>
<td>(Disagree)</td>
<td>(Agree)</td>
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<td>9</td>
<td>If I were asked to write poetry, I would prefer to write it in English</td>
<td>(Disagree)</td>
<td>(Agree)</td>
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<td>10</td>
<td>I prefer going to social gatherings where most of the people are Asian</td>
<td>(Disagree)</td>
<td>(Agree)</td>
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<tr>
<td>11</td>
<td>I have both American and Asian friends</td>
<td>(Disagree)</td>
<td>(Agree)</td>
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<tr>
<td>12</td>
<td>There are times when I think no one understands me</td>
<td>(Disagree)</td>
<td>(Agree)</td>
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<tr>
<td>13</td>
<td>I get along better with Americans than Chinese</td>
<td>(Disagree)</td>
<td>(Agree)</td>
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<tr>
<td>14</td>
<td>I feel that Asians treat me as an equal more so than Americans do</td>
<td>(Disagree)</td>
<td>(Agree)</td>
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<tr>
<td>15</td>
<td>I feel that both Asians and Americans value me</td>
<td>(Disagree)</td>
<td>(Agree)</td>
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<tr>
<td>16</td>
<td>I sometimes find it hard to communicate with people</td>
<td>(Disagree)</td>
<td>(Agree)</td>
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</tr>
<tr>
<td>17</td>
<td>I feel that Americans understand me better than Chinese do</td>
<td>(Disagree)</td>
<td>(Agree)</td>
<td></td>
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</tr>
<tr>
<td>18</td>
<td>I would prefer to go out on a date with an Asian than with an American</td>
<td>(Disagree)</td>
<td>(Agree)</td>
<td></td>
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<tr>
<td>19</td>
<td>I feel very comfortable around both Americans and Asians</td>
<td>(Disagree)</td>
<td>(Agree)</td>
<td></td>
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</tr>
<tr>
<td>20</td>
<td>I sometimes find it hard to make friends</td>
<td>(Disagree)</td>
<td>(Agree)</td>
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<tr>
<td>Question</td>
<td>Disagree</td>
<td>Agree</td>
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<tr>
<td>21 I find it easier to communicate my feelings to Americans than to Asians</td>
<td>(Disagree)</td>
<td>(Agree)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 I feel more relaxed when I am with an Asian than when I am with an American</td>
<td>(Disagree)</td>
<td>(Agree)</td>
<td></td>
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<td></td>
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<tr>
<td>23 Sometimes I feel that Asians and Americans do not accept me</td>
<td>(Disagree)</td>
<td>(Agree)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>24 I feel more comfortable socializing with Americans than I do with Asians</td>
<td>(Disagree)</td>
<td>(Agree)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>25 Asians should not date non-Asians</td>
<td>(Disagree)</td>
<td>(Agree)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>26 Sometimes I find it hard to trust both Americans and Asians</td>
<td>(Disagree)</td>
<td>(Agree)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27 Most of my friends at work/school are American</td>
<td>(Disagree)</td>
<td>(Agree)</td>
<td></td>
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</tr>
<tr>
<td>28 I find that both Asians and Americans often have difficulty understanding me</td>
<td>(Disagree)</td>
<td>(Agree)</td>
<td></td>
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<td></td>
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<tr>
<td>29 I find that I do not feel comfortable when I am with other people</td>
<td>(Disagree)</td>
<td>(Agree)</td>
<td></td>
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</tbody>
</table>

Scale: 1-7; Cronbach’s alpha (by subscale) .77/.76/.74/.85, test-retest: NA
Cyberball Post experimental Questionnaire

**Instruction:** Please, read them carefully and check the box that best describes your feelings.

**What percent of the time was the ball thrown to you?**

<table>
<thead>
<tr>
<th>%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>100%</th>
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<tr>
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<td>6</td>
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</tbody>
</table>

**To what extent were you included by the other participants during the game?**

<table>
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<tr>
<th>%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
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</tbody>
</table>

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**Belonging**

1 I felt poorly accepted by the other participants.

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</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Very much so much</td>
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</table>

2 I felt as though I had make a “connection” or bonded with one or more of the participants during the Cyberball game.

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<tr>
<td></td>
<td>Not at all</td>
<td>Very much so much</td>
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</table>

3 I felt like an outsider during the Cyberball game.

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<tr>
<td></td>
<td>Not at all</td>
<td>Very much so much</td>
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**Control**

4 I felt that I was able to throw the ball as often as I wanted during the game.

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<td>Not at all</td>
<td>Very much so much</td>
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5 I felt somewhat frustrated during the Cyberball game.

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<td>Not at all</td>
<td>Very much so much</td>
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6 I felt in control during the Cyberball game.

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<td>Very much so much</td>
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**Self-esteem**

7 During the Cyberball game, I felt good about myself.

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<td>Not at all</td>
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<tr>
<td>8 I felt that the other participants failed to perceive me as a worthy and likeable person.</td>
<td>1…………2…………3…………4…………5…………6…………7…………8…………9</td>
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<tr>
<td>9 I felt somewhat inadequate during the Cyberball game.</td>
<td>1…………2…………3…………4…………5…………6…………7…………8…………9</td>
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<tr>
<td>Meanings existence</td>
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<tr>
<td>10 I felt that my performance (e.g., catching the ball, deciding whom to throw the ball to) had some effect on the direction of the game</td>
<td>1…………2…………3…………4…………5…………6…………7…………8…………9</td>
<td></td>
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<tr>
<td>11 I felt non-existent during the Cyberball game.</td>
<td>1…………2…………3…………4…………5…………6…………7…………8…………9</td>
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<td>Mood</td>
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<tr>
<td>13 I felt angry during the Cyberball game.</td>
<td>1…………2…………3…………4…………5…………6…………7…………8…………9</td>
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<tr>
<td>14 I enjoyed playing the Cyberball game.</td>
<td>1…………2…………3…………4…………5…………6…………7…………8…………9</td>
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Appendix E
Debriefing Statement

Project Title: Ostracism During Cross-Cultural Adaptation: Can Acculturation Strategy Mediate the Experience of Ostracism?
Principal Investigator: Siyun Ai, sa005@marietta.edu
Faculty Advisor: Dr. Mark Sibicky, sibickym@marietta.edu

Thank you for your time and effort. Because I did not want to bias your answer I could not tell you everything about this study. The purpose of this study is to understand whether an acculturation strategy of separation/marginalization will buffer the effects of social rejection by individuals from host culture when facing ostracism by host culture members. In the current study, you were led to believe you were playing Cyberball with two students sitting at computers from Marietta College. You actually played Cyberball with computer following a pre-arranged script in which you were included in the game for the first few times, but then excluded for the other times.

In the current study, I hypothesized that international students using the acculturation strategies of integration and assimilation will score significantly lower on self-reported self-esteem, belonging, personal control, and meaningful life existence when ostracized by two American students than international students who use separation or marginalization acculturation strategies. You were divided into integration/assimilation group or assimilation/marginalization group according to your score of the East Asian Acculturation Measure (EAAM). Then, you were randomly assigned to one of two conditions: an out-group ostracism condition and an in-group ostracism condition.

You may have experienced mild distress for a few minutes because of the ostracism condition. However, those negative feelings are temporary. According to past research, the discomfort of ostracism fades quickly especially since you now know that you were not being socially rejected (Goodwin, Williams, & Carter-Sowell, 2010).

How are you feeling now? Do you understand the reasons why I could not tell you the real reason for the study? Do you have any questions or concerns at this time? If you feel anxious, stressed, or have difficult time adjusting to life at Marietta College, I will recommend you talk to a CA in student life or make an appointment to talk to a counselor in the Center for Health and Wellness. Please let someone know if you are feeling anxious or stressed.

Additionally, please do not discuss this study with other potential participants, especially don’t tell them other players are not real because it will bias my findings. If they already know other players are fake, their data will not be used in this study. I appreciate your cooperation.

The information you may need

The Center for Health and Wellness (CHW) is located in Harrison Hall. CHW provides individual counseling focused on arrange of clinical issues. Many of the students who come into the CHW are experiencing academic difficulties. Some students are having trouble adjusting to college life. To schedule an initial appointment, you can call 740-376-4477.
**List of Table**

Table 1. Frequencies of Different Variables

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
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</thead>
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<tr>
<td><strong>Gender</strong></td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>31</td>
<td>62.0</td>
</tr>
<tr>
<td>Female</td>
<td>19</td>
<td>38.0</td>
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<td><strong>Country</strong></td>
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<td></td>
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<tr>
<td>China</td>
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<tr>
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<td>10.0</td>
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<td>0</td>
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<td>Separation</td>
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<tr>
<td>Integration</td>
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<td>62.0</td>
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<tr>
<td>Marginalization</td>
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<td>10.0</td>
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</tbody>
</table>
Figure Captions

Figure 1. A Graph of Mean of Participants’ Fundamental Needs by Acculturation Groups and Two Ostracism Condition.
Figure 2. A Graph of Mean of Participants’ Fundamental Needs by Ostracism Condition
Figure 3. A Graph of Mean of Participants’ Fundamental Needs by Acculturation Groups
Figure 4. A Graph of Mean of Participants’ Fundamental Needs by Different Countries

![Graph showing mean of participants' fundamental needs by different countries.

Error Bars: 95% CI]
Figure 5. A Graph of Mean of Participants’ Fundamental Needs by Different Acculturation Strategies
Figure 6. A Graph of Correlational Relationship Between Self-esteem and Age

\[ R^2 \text{ Linear } = 0.188 \]
Figure 7. A Graph of Correlational Relationship Between Self-esteem and Duration in the U.S.
Figure 8. A Graph of Correlational Relationship Between Participant’s Control and Assimilation Score

R² Linear = 0.108