Cross-Cultural Differences in Grudge-Holding

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Abstract

The current research investigated cross-cultural differences in holding grudges, and the effects grudge-holding may have on religiosity, stress, and well-being. Two studies were conducted: an online questionnaire administered to participants from both collectivistic, Eastern cultures and individualistic, Western cultures inquiring about current personal grudges, and a laboratory study to induce grudges in East Asian and American participants against culturally matched confederates. Results in Study 1 were inconclusive. Results in Study 2 reflected cultural differences; American participants held more ill will against the confederates than the East Asian participants. Though the East Asian participants’ scores decreased at each test time, they still did not appear to hold any ill will against the confederates. Significant relationships between culture, stress, and well-being were found, though some hypotheses were contradicted. Potential cultural explanations for the findings are explored.
Introduction

“Some wounds run too deep for the healing.” -J.K. Rowling, *Harry Potter and the Order of Phoenix*

“To be wronged is nothing, unless you continue to remember it.” –Confucius, *The Analects of Confucius*

As renowned Chinese philosopher Confucius and modern author J.K. Rowling both stated, anger is a deep-seated emotion, sometimes present long past a situation has transpired. After a negative situation occurs, people seemingly have two choices of how to react: letting the anger dissipate or continuing to harbor the anger. In the case of the latter, this is where grudges begin.

However, in parsing the idea of grudges and how they may arise, we must think of how situations, environments, and personal differences may affect grudge-holding. Significantly, how may culture affect grudge-holding or lack thereof? Let’s take an example of Amy, a college student in the United States, and Aimi, a college student in China; both Amy and Aimi have both been wronged by their respective friends. When handling this situation, are they quick to forgive, or do they hold a grudge against their offenders? Do they sit down with the offenders, detail their transgression and patiently wait for an apology, or do they stay silent, quietly stewing on their resentment?

These questions currently remain unanswered in the field of psychology, and continue to baffle researchers attempting to understand the human mind and interpersonal relations, specifically across different cultures. While previous literature focuses on
forgiveness and research within Western cultures, the current research seeks to broaden
prior findings by investigating the act of grudge-holding across cultures. First, in order to
properly understand what grudge are, who is holding them, and the role culture plays,
definitions of grudges (grudge-holding) and forgiveness need to be examined.

Forgiveness and Grudge-Holding: Definitions and Previous Research

As defined by Merriam-Webster, a grudge is “a feeling of deep-seated resentment
or ill will.” This definition, though useful in a literary sense, lacks practical application;
for example, how long must one contain these feelings of ill will to consider them a
grudge versus general anger, or does a specific event have to take place to differentiate a
grudge from a general dislike of a person? Researchers have attempted to identify a more
practical and empirical definition. Lawler-Row, Scott, Raines, Edlis-Matityahou, &
Moore (2007) asked 270 young adults for their definition of what a grudge is, and later
compared these definitions to previous theories. In this study, the experimenters were
able to pinpoint three specific dimensions of grudges: (1), orientation, defined as who a
grudge is directed towards i.e. intrapersonal or interpersonal, (2), direction, seen as the
emotional location to which a grudge takes the grudge-holder (i.e., to a place of anger or
a place of positivity), and (3), form, described as the way in which the grudge is
expressed, such as in emotions or actions. While this study was useful in deconstructing
the various inter-workings of grudges, the authors still did not arrive at a concrete
definition. Bunker and Ball (2008) sought to find an empirical definition for a grudge in
service relationships, defining a grudge as “maintaining a victim role and perpetuating
negative emotions associated with rehearsing some hurtful offense.”
Forgiveness, viewed in literature as the opposite of grudge-holding, is similarly difficult to quantify, as it incorporates both intrapersonal and interpersonal aspects. However, author and researcher Everett L. Worthington proposed a comprehensive definition of forgiveness that has been used empirically. He described forgiveness as a process involving two actors: a victim and an offender (Worthington, 1998). The offender commits a transgression against the victim, causing negative feelings on the part of the victim directed toward the offender, as well as internalized negativity. In order for forgiveness to occur, rather than grudge-holding, the victim must reach forgiveness internally, recovering from the transgression emotionally within themselves and toward the other person. The victim must also vocalize his or her forgiveness toward the offender, allowing the relationship that preceded the transgression to be restored. Without both internal and vocalized forgiveness, a grudge, often varying in degrees of severity, still exists.

Using these practical definitions, researchers studied grudge-holding and forgiveness across contexts. Unsurprisingly, the focus of the bulk of this research centers on interpersonal relationships. Gordon and Baucom’s (1998) model of forgiveness in marriages has been the basis for research in the field. The model has three stages: first, a response to the event, second, an attempt to contextualize the event, and third, a victim attempt to reconcile the event (intrapersonally, interpersonally, or both). A person reaches forgiveness when they view the relationship realistically, negative emotions against the transgressor dissipated, and there is no longer a desire to punish the transgressing partner. Focusing on interpersonal relationships outside of marital relationships, Zechmeister and Romero (2002) looked at the roles in which victims and
transgressors respectively play in grudge-inducing situations. They asked participants to write both a narrative in which they were the victims and a narrative in which they committed the transgression. Findings showed that victims, in cases where unforgiveness (grudge-holding) exists, viewed the situations as “open”, meaning unresolved, whereas transgressors viewed the situations as “closed”, meaning resolved. Forgiveness positively correlated with positive outcomes, and negatively with continued anger. Empathy with the transgressor correlated with victim forgiveness, while transgressor’s empathy with the victim negatively correlated with self-forgiveness of the transgressor. Additionally, researchers found that initial forgiveness correlated with higher empathy towards the transgressor later, and that initial forgiveness and empathy result in the victim viewing the transgression as less severe over time. The closeness of the victim and the transgressor also affects forgiveness. Karreman and Aarts (2007) discovered that participants were quicker to forgive those they are close to than someone to whom they are less close, concluding that forgiveness was expected and almost habitual in close relationships. Forgiveness in interpersonal relationships has also been investigated through the lens of benefits for the victim, the transgressor, and the overall relationship. Within interpersonal relationships, writing about positive outcomes resulting from the transgression (McCullough Root, & Cohen, 2006) and receiving apologies from the transgressors (Takakua, 2001) both increased victim willingness to forgive. Additionally, some past research shows that forgiveness deters future offenses in close relationships (Wallace, Exline, & Baumeister 2008).

Though the aforementioned studies demonstrate the positive effects forgiveness often has on relationships, previous research shows that forgiveness has its negative
consequences. While, forgiveness appears to correlate with marriage satisfaction (Gordon, Hughes, Tomcik, Dixon, & Litzinger, 2009), the degree to which a couple’s children view the couple as a cohesive parenting unit (Gordon et al., 2009) and marriage longevity (Fenell, 1993), forgiveness, in contradiction to the Wallace, Exline, & Baumeister (2008) findings, has been found to not deter future transgressions in a marriage (McNulty, 2010). Paleari (2011) found a gender imbalance in marriages such that wives tended to “over benefit” from forgiveness (they were more frequently forgiven, yet were less forgiving toward their husbands), while husbands “under benefited” from forgiveness (were more forgiving, yet forgiven less). The discrepancy in forgiveness correlated with decreased personal and relational well-being for the wives over a 6-month period. Previously, McNulty (2008) concluded that forgiveness within marriage is both beneficial and detrimental. Forgiveness for infrequent transgressions correlated with higher marriage satisfaction, while forgiveness for frequent minor transgressions correlated with lower marriage satisfaction. These studies exemplify the complexities of forgiveness and grudge-holding; while in some cases forgiveness is helpful, in others, holding a grudges has benefits.

Significantly, all of the above studies were conducted with Western samples. While the findings pose interesting conclusions, it is likely that cross-cultural samples may reflect different results. The social and cultural norms that greatly affect interpersonal interactions may dictate whether victims forgive or hold grudges. Thus, the focal point of the current research is cultural differences, and the effect culture may play in grudge-holding within social interactions.
What is Culture and How is it Examined?

In order to understand cultural differences in holding grudges and forgiveness, we must first define culture. Geert Hofstede (1980) examined cultures across the world and created a model to compare cultures that encompasses a series of different dimensions. For the current research, the specific dimension of individualism-collectivism will be used to compare cultures. As defined by Hofstede, individualism is “a preference for a loosely-knit social framework in which individuals are expected to take care of themselves and their immediate families only”. Conversely, collectivism is “a preference for a tightly-knit framework in society in which individuals can expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty”. This can be illustrated through self-image: in an individualistic culture, members associate the self with “I”, while in a collectivistic culture, while members associate the self with “we”. Members of individualistic cultures see themselves as autonomous individuals concerned with personal rights and well-being, while members of collectivistic cultures stress the importance of group harmony and belonging to the group.

In evaluating this dimension, Hofstede assigned scores to countries ranging from 1 to 100, 100 representing the most individualistic, 1 representing the most collectivistic. Countries with the highest individualist scores include many Western countries such as the United States, (a score of 91) the United Kingdom (89), and Australia (90), while East Asian countries such as China (20) and South Korea (18) are rated with the highest collectivist scores. Some countries, such as Turkey (37), Russia
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(39), and Argentina (46), have elements of both individualism and collectivism. The differences in this dimension are associated with different cultural norms, as well as financial and political systems. For example, politically and socially liberal and communist countries tend to be more collectivistic, while conservative and capitalistic countries tend to be more individualistic. These greater political and economic factors are likely influential in the cultural norms and cultural grouping that occurs in different countries.

The individualism-collectivism dimension is important in understanding underlying cultural differences in holding grudges in interpersonal relationships. Differences across the individualism-collectivism dimension signal variations in ways members of different cultures act towards each other and in ways they perceive interpersonal interactions. This dimension, more than other cultural dimensions Hofstede includes, affects social and group relationships, which are of key significance when investigating the role culture may play in grudge-holding and forgiveness across culture.

Cross-Cultural Differences in Interpersonal Interactions

Research supports that friendships and relationships have key similarities across cultures, especially among college-aged samples. This is of particular importance, as the current research examines interpersonal attitudes among college students, as well as a general sample. Studies have shown that across all different cultures, having friends increases happiness (Requena, 1994; Demir, Jaafar, Bilyk, & Mohd Ariff, 2012; Demir, Özen, & Doğan, 2012; Demir, Doğan, & Procsal, 2013), particularly in college
students. Research also shows that involvement in romantic relationships positively affects well-being across cultures (Stack & Eshleman, 1998). These studies demonstrate that relationships, whether platonic or romantic in nature, are important to people, specifically college-aged students, across cultures.

In spite of the similarities delineated above, previous literature indicates that there are cross-cultural differences in the definitions and qualities that determine friendships and romantic relationships. Argyle, Henderson, Bond, Iizuka, & Contarello (1986) compared friendship “rules” between British, Japanese, Hong Kong, and Italian samples. Participants received lists of 33 friendship rules, and ranked each on a 9-point scale ranging from 1 (rule very important) to 9 (rule very unimportant). Examples of these rules include acknowledging birthdays, using first names, and not engaging in sexual activity with one another. All samples endorsed friendship rules, though these rules often differed. The Italian sample highly endorsed rules regarding intimacy (self-disclosure, closeness of friends), particularly in comparison to the Japanese sample. The Japanese sample strongly endorsed obedience and following authority, more so than the other samples. However, all the samples highly endorsed rules regarding conflict resolution, such as giving apologies. Thus, this finding suggests that while cultural differences may exist in terms of what defines a friendship, how to best maintain one, and what results in conflict, after a conflict arises, there are cultural similarities in how the conflict is resolved.

Other studies researched these friendship definitions more in-depth, closely examining cultural differences in categorization of friends. Researchers Ryback and McAndrew (2006) compared friendship definitions between students in the United States
and Poland. Participants rated 9 hypothetical friendships on levels of intimacy, and then rated their own personal friendships on levels of intimacy. They found that both samples rated their best friendships as more intimate than their friendships, and their friendships more intimate than acquaintanceships. Additionally, American sample rated all types of friendships as more intimate than the Polish sample rated theirs. Similarly, a comparison of friendships within the United States and Russia (Sheets & Lugar, 2005) found that the Russian sample not only reported having fewer friendships, but these friendships involve less intimacy and self-disclosure. However, unlike in the Ryback and McAndrew (2006) study, there was a gender interaction; women in both countries reported more conversation-focused and intimate relationships than men.

As shown above, intimacy plays a vital role in determining closeness and importance of friendships and interactions, both of which may affect the occurrence of forgiveness or grudge-holding within these relationships. You and Malley-Morrison (2000) examined differences in intimacy between friendships of Korean students and Caucasian American students. Korean students scored lower on intimacy and friendship expectations, but higher on preoccupied attachment compared to the American students. Gummerum and Keller (2008) confirmed these results in a cross-cultural, longitudinal study looking at friendships and development in Iceland, China, Russia, and what was formerly East Germany. They found that friendships mature with age, and that the Russian and Chinese samples, the cultures highest in collectivism, focused their friendships more on mutual responsibility and emotional dependence-key aspects of group harmony.
Additionally, intimacy did not correlate to self-disclosure for the Chinese participants, who viewed close friends as portals to larger social systems compared to the other samples, especially the Icelandic sample.

Lastly, Gonzalez, Moreno, & Schneider (2004) studied Cuban and Canadian samples to investigate friendship expectations and differences in intimacy. Intimacy was much more important and influential to Cuban friendships than to Canadian friendships, though both samples rated acceptance and loyalty as very important. However, Canadians valued sharing experiences with friends, while Cubans highlighted mutual support between friends as important. These studies reflect how the individualism-collectivism dimension affects friendship expectations across cultures; samples from highly collectivist samples tend to be less personally intimate, but have friends as extensions to wider social groups and for group benefit.

Cross-Cultural Differences in Relationship Conflict

Another significant topic when evaluating cross-cultural differences in grudge-holding is friendship conflict. This is particularly important, as conflicts may induce forgiving or grudge-holding behavior. Though research on conflict reflects differences across cultures, findings remain scattered. In general, research suggests that members from individualistic cultures tend to have more conflict, though they also attempt to resolve conflict more. Research also indicates that different types of infractions incite conflict in different cultures; what collectivist culture members find offensive, and thus possibly grudge-worthy, differs from what individualist culture members find offensive.
Research shows differences in friendship conflict across culture begin at a young age; Woan, Schneider, Greenman, & Hunn (2001) compared companionship, conflict, and closeness in friendships of children aged 8 and 9 in Taiwan and Canada. Though stability of friendships was similar across cultures and gender, Taiwanese children reported significantly lower rates of conflict in their friendships than the Canadian children. Additionally, friends among the Taiwanese sample agreed more about the amount of conflict in their friendship than friends in the Canadian sample. A similar study by French, Chen, Chung, Chen, & Li (2011) supports these findings, showing that differences with conflict resolution existed between Chinese and Canadian children. These studies reflect the effects culture has on friendship and conflict begins at an early age, and thus, may impact cross-cultural interactions later in life.

Cross-cultural conflict research conducted with college students varies on the support of these findings. A study by Sheets and Lugar (2005a) compared conflict in friendships of Russian and American university students. The two groups of students were first asked to read a series of friendship vignettes and answer if they would end in conflict or not. Contrary to the Woan et al. (2010) findings, members of higher-rated collectivist cultures were much more likely to cite conflict within friendships, as perceived in the vignettes. In examining cultural differences in betrayal, Russian students cited a betrayal of confidence as the most likely reason to have a conflict with friends, while American students cited keeping secrets from a friend as most likely to cause conflict. Finally, another study looked at conflict strategies between friends in Turkey and Canada (Cingoz-Ulu & Lalonde, 2002). The Turkish students reported higher avoidance of conflict than the Canadian students, who reported trying to compromise or
use third party assistance. Canadian students additionally changed their conflict strategy depending on whom they had a conflict with, while Turkish students used similar techniques with all conflicts. This is particularly significant to the current research, as this finding reflects that members from more collectivistic cultures view all group members and interpersonal interactions to be the same and part of the same collective group. Thus, members can employ the same conflict strategies no matter the relationship or the conflict.

Similar research examined conflict and conflict resolution within romantic relationships. Cingoz-Ulu and Lalonde (2002) also investigated conflict in terms of gender and within romantic relationships. They concluded that in both Canada and Turkey, women use persuasion more as a conflict-reduction strategy with romantic partners, and men paid more attention to conflicts they had with same-sex friends. This finding suggests cross-cultural differences within romantic relationships particularly when dealing with conflict, and, similar to friendships, people have specific preferences and expectations for partners and partner behavior when it comes to romantic relationships that vary culture by culture. de Munck, Korotayev, de Munck, & Khaltourina (2011) confirmed these cultural differences in preferences and expectations. In this study, de Munck et al. (2011) examined romantic preferences and perceptions in Russia, the United States, and Lithuania. Participants first completed a 14-item questionnaire, answered the question: “What do you associate with romantic love?” and completed an interview about romantic love and their perceptions of romantic love. While researchers could not pinpoint an overarching idea of romantic love across the three cultures, participants cited the key factors of happiness (as determined by the
researchers)—intrusive thinking, passion, altruism, and an improvement in well-being—as important factors within a successful romantic relationship. The desire to be together also ranked as most important to a relationship across all the cultures. However, the ideas of friendship and “comfort love” were essential to the American perception of romantic love, and undiscussed by the Russian and Lithuanian samples. The Russian and Lithuanian samples were more likely than Americans to cite romantic love as temporary and something from a “fairytale.” This study, as well as the aforementioned findings, suggest fundamental differences in the functioning of both romantic and non-romantic love, which could impact the ways in which members of different cultures deal with conflict—either with forgiveness or grudge-holding.

**Previous Cross-Cultural Research on Forgiveness and Grudge-Holding**

While these findings demonstrate cultural differences in relationships, interpersonal interactions, and conflict strategies in relationships, little research has touched on cultural differences in forgiveness and grudge-holding. The few findings, however, confirm that the dimension of individualism-collectivism affects grudge-holding. One study examined differences in forgiveness and apologies in Japan and the United States, finding that students from both countries were more likely to forgive transgressors upon hearing an apology, as well as after recalling themselves as an offender in a situation (Takaku, Weiner & Ohbuchi, 2001). However, when recalling themselves as offenders, the students from the United States were much more forgiving than Japanese students. The authors suggest that the collectivist cultural influences found in Japan’s culture could be at play here. Collectivism promotes group and social
harmony, and therefore, forgiveness has less to do with picturing themselves in the role of the offender, as they already view themselves as within the same social group and as similar to the offender. Reasons for forgiving also differed across culture; the American students had a more emotional reaction when deciding to forgive, while the Japanese students considered stability, meaning whether or not the transgression would occur again, when deciding to forgive. The authors suggest that their findings can be understood through the individualism versus collectivism binary, as American students may view the event as a one-time, personal offense, heavily considering their personal emotions surrounding the offense, while Japanese students may view the offense as a possible serial event that could cause further damage to the group.

Karremans, Regalia, Paleari, Fincham, Cui, Takada, & Uskul (2011) conducted a cross-cultural study on forgiveness between three individualistic countries (the United States, the Netherlands, and Italy), two collectivist countries (Japan and China), and one country that displayed both individualistic and collectivistic aspects, Turkey. Results in this study support previous findings; while interpersonal closeness and forgiveness were highly correlated across cultures, this correlation was weaker for collectivist cultures. This suggests that among members of collectivist cultures, closeness is not as critical for interpersonal forgiveness as overall group harmony. Similarly, a study compared forgiveness in France (an individualistic country) and The Republic of the Congo (a collectivistic country), finding that interpersonal constructs, such as the restoration of trust and affection within the relationship, were more important in forgiving for the Congolese, while intrapersonal constructs, such as the morality of forgiveness, were more important for the French (Kadiangandu, Gauche, & Mullet, 2007).
Kadiangandu et al. also found that the Congolese viewed forgiveness as extending beyond just a personal situation and interaction, but rather, affecting entire groups such as religious groups, political groups, and even group members that died. A third study compared forgiveness in Greece, Britain, and Cyprus (Scobie, Scobiem & Kavkavoulis, 2002). They found that the British and Greek samples were less willing to forgive than the Cypriot sample, though there was a bigger difference between the amount of forgiveness given by the British and Cypriot samples than the British and Greek samples or the Cypriot or Greek samples. This exemplifies that cultural context does play a significant role in forgiveness and grudge-holding; it is very likely that members of collectivist cultures are more likely to forgive for the good of the group, while members of individualist cultures will forgive when they deem it personally right and necessary.

Based on the above studies, researchers have recently begun to theorize about the influence culture, namely the individualism-collectivism dimension, has on interpersonal interactions. Hook, Worthington, Utsey, Davis, Gartner, Jennings, & Dueck (2012) theorized that interpersonal forgiveness is shaped by both the context of the interpersonal relationship, as well as what the concept of forgiveness means to that person. They found that greater forgiveness correlated with both collectivism and a continued relationship with the offender after the transgression. Additionally, Hook, Worthington, & Utsey (2009) suggest that forgiveness differs in individualistic and collectivist cultures. They pinpoint two patterns that are likely to be stable across cultures; first, because collectivist cultures emphasize social harmony, people in collectivist cultures are more likely to forgive, and second, forgiveness in a collectivist culture would be motivated by a desire for group harmony rather than a personal decision of forgiveness.
Potential Mechanisms for Differences in Cross-Cultural Grudge-Holding

While the above research indicates that there are differences in grudge-holding across cultures, the exact mechanisms that underlie these differences are not well-understood. Research shows that cultures varying across the individualism-collectivism dimension differ with regards to friendships and conflict management, as mentioned, as well as emotional suppression, relational mobility, religiousness, and mental and physical well-being. These could all be factors that play a role in cultural differences in forgiveness and grudge-holding, and thus, will be discussed in the current research.

Emotional Suppression. Researchers suggest that emotional suppression varies cross-culturally according to individualism-collectivism. Emotional suppression, defined as the “conscious inhibition of one’s own emotionally expressive behavior while emotionally aroused” (Gross & Levenson, 1993), exists in both individualistic and collectivist cultures. While one study, Cahour (2008), found that members of individualistic cultures suppress negative emotions to avoid conflict, maintain interpersonal relationships, and foster cooperation, most findings contradict this, suggesting that collectivistic countries tend to value and encourage emotional suppression (Butler, Lee, & Gross, 2007; Frijda & Sundararajan, 2007). Previous research has found that members of collectivist cultures place higher value on emotional restraint (Bond & Hwang, 1986; Markus & Kitayama, 1994) and emotion suppression (Matsumoto, Yoo, Nakagawa, Anguas-Wong, & Bauer, 2008; Perez & Soto, 2011) than those in individualistic cultures. Thus, emotional suppression could impact grudge-holding across
cultures; members of collectivist cultures may be less likely to hold, or express, grudges, as they may continually suppress any feelings of ill-will or that go against group and social harmony. Members of individualist cultures, however, may feel more entitled or freely able to feel and express their emotions, as they are not culturally taught to withhold their emotions or feelings.

**Relational Mobility.** Relational mobility is “the general degree to which individuals in the society have the opportunities to form new and terminate old relationships” (Schug, Yuki, & Maddux, 2010). Relational mobility often varies across cultures, and is very likely associated with the individual-collectivist dimension. Due to greater group attachment and emphasis of group goals, members of collectivist cultures are less likely to seek out greater networks of friends or acquaintances. This may mean that the friends or relationships members of collectivist cultures do have to be of greater value or necessity, as they are less able to replace their social network. Thus, these members may be less likely to hold a grudge in order to keep the peace within current relationships for fear of losing a vital relationship that would be difficult to replace. A study by Oishi (2010) found that those across all cultures with lower residential mobility (defined similarly to relational mobility, but more dependent on one’s residence and likelihood of leaving a location) had more obligatory relationships, such as small group memberships and friendships that were not important or cherished, than those with higher residential mobility. Higher residential mobility correlated with valuing personal goals and the self, rather than the collective self. Similarly, researcher Joanna Schug conducted two significant studies that examine the effects of relational mobility on friendships,
specifically closeness and self-disclosure. In her first study, Schug, Yuki, Horikawa, & Takemura (2009) compared friendships of those from the United States and Japan, investigating the similarities pairs of friends had to each other. They found that friends in the United States shared more similarities, which was mediated by relational mobility. In a second study, Schug, Yuki, & Maddux (2010) found that self-disclosure was mediated by Japanese and American participants’ perception of their own relational mobility. Relational mobility predicted self-disclosure within the two cultures, and the incentive of self-disclosure (those with higher relational mobility were more motivated to self-disclose) mediated this relationship. These studies suggest higher motivation for forgiveness among collectivist cultures, as there is less access to greater social networks and connections to members not within a preset cultural group.

Religiosity. Religiosity, a key cultural component that often dictates cultural norms, is another significant factor that may greatly impact forgiveness and grudge-holding across cultures. Though no previous cross-cultural comparisons examine the role religiosity may play in forgiveness, it is likely that cultures with religious variance will similarly vary in forgiveness with relationships, as religion often emphasizes the necessity of forgiveness, such as Catholic confession or Yom Kippur in Judaism. One study looked at adolescent and adult forgiveness in Kuwaiti citizens (Ahmed, Azar, & Mullet, 2007). While age had no effect on levels of forgiveness, religiosity correlated with higher forgiveness in an adult subset of the sample. Suchday, Friedberg, & Almeida (2006) framed forgiveness in a religious context, using it as basis to compare forgiveness and well-being in India and the United States. Mumbai and American college students
completed questionnaires about forgiveness, rumination, stress, and physical health. In both samples, less forgiveness correlated with higher stress levels. Rumination mediated the relationship between forgiveness and stress, to which they attributed to religious beliefs. These studies, though limited, indicate that religiosity likely impacts forgiveness and grudge-holding, though the role culture plays in this relationship still remains unknown. Thus, the current research seeks to fill in this gap.

**Effects of Grudge-Holding.** While previous research shows that cultural differences in forgiveness and grudge-holding do exist, and there are many mechanisms that drive these differences, what are the cross-cultural effects of grudge-holding? Western researchers have looked at the effects of holding grudges on health and well-being. Forgiveness researchers Worthington and Scherer (2004) theorize that forgiveness is a coping strategy that can ease the negative emotions of holding a grudge. Furthermore, they propose both emotional and health benefits that will stem from forgiveness after a transgression. Berry and Worthington (2001) examined these proposed physical and mental health effects on forgiveness; the experimenter separated the participants into two groups, happy with a relationship or unhappy with a relationship, and then measured the participants’ baseline salivary cortisol (to indicate stress level). Participants then imagined their relationship for 5 minutes, followed by another salivary cortisol measurement. Participants in the unhappy group had higher cortisol levels after the activity, which correlated with self-reports of unforgiveness. Another study investigated mental and physical health effects when participants recounted grudges and when they imagined forgiving the offender (van Oyen Witvliet, Ludwig, & Vander Laan,
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2001). When recounting their grudge, participants reported higher levels of negative emotions and exhibited stress reactions, such as increased blood pressure, corrugator (brow) activity, skin conductance, and heart rate. When expressing forgiving thoughts, participants expressed lower stress responses.

Several studies have also looked specifically at participants recently going through divorce or encountering marital problems to examine if forgiveness correlates with greater well-being and coping. Hannon, Finkel, Kumashiro, & Rusbult (2011) brought happily married couples into the lab to discuss transgressions that occurred within their marriage, and conciliatory efforts made following the transgressions. Afterwards, participants completed a blood pressure test. Results indicated that victim forgiveness (shown through conciliatory efforts) was highly correlated with lower blood pressure for both the victim and the transgressor. In a similar study by Rye, Folck, Heim, Olszewski, & Traina (2004), recently-divorced participants were tested for emotional health and forgiveness measured in two ways: absence of negative emotions and a presence of positive emotions towards their ex-spouse. They found that forgiveness, shown as not harboring negative emotions towards the idea of divorce as well as towards their ex-spouse, correlated with higher well-being. Forgiveness also correlated with higher religious well-being, and an absence of anger and depression. However, forgiveness in presence of positive emotions did not correlate with greater well-being, nor anger, depression, or greater religious well-being. Additionally, religiosity mediated the relationship between forgiveness (positive presence) and emotional well-being, indicating the effect religion can have on forgiveness. This again signals the role religiosity plays in forgiveness, as well as implications of forgiveness in relationships.
Current Research

The above research is limited to Western cultures. No previous studies examined the mental and physical implications of forgiveness and grudge-holding, nor the role religiosity plays in forgiveness across cultures. The present research seeks to fill in these holes in the field, examining differences in grudge-holding across several cultures, and the effects grudge-holding have in different cultures. The present study will investigate the differences in grudge-holding across Eastern collectivist cultures and Western individualist cultures, specifically looking at the correlations between holding grudges and religiosity, well-being, and stress.

The current research investigated these aspects of grudge-holding in two studies: an online questionnaire administered to participants from both Eastern collectivist and Western individualist cultures that inquired about current personal grudges (Study 1), and, second, a laboratory study to induce a grudge in the participants against confederates (Study 2). The online questionnaire included open-ended questions regarding how many grudges the participants hold, the relationship the participants have with the transgressors, and a description of the transgression.

The laboratory study is more complex; participants were deceived to believe they were participating with fellow students in a study testing teamwork, but were actually paired with confederates. The participants engaged in three tasks: first, the confederates and participants received a list of questions about prior teamwork experiences to discuss together and encourage self-disclosure in order to establish rapport. Confederates were trained to establish rapport, using methods such as synchronizing movements (Valdesolo
& DeSteno, 2011), establishing trust (Webera, Johnson & Corriganc, 2009), and encouraging and participating in self-disclosure (Collins & Miller, 1994; Sermat & Smyth, 1973; Vittengl & Holt, 2000). Additionally, the confederates were culturally matched with the participants in order for the relationships between the participants and confederates to be as strong as possible, as supported by Yuki, Maddux, Brewer, & Takemura (2004), and to culturally prime participants. The participants then took a short questionnaire regarding their social liking of the confederates, taken from the Interpersonal Attraction Scale. Second, the confederates and participants worked together to build a robot, followed by filling out a questionnaire about their task attraction, another subscale of the Interpersonal Attraction Scale. Finally, the experimenter asked participants to explain the pair’s teamwork and rate their fellow team member’s skill and efforts. The participants consistently cited little or no issue with the confederates, but when the confederates spoke about their experience, they “threw” the participants “under the bus” (so to speak), remarking on the participants’ lack of effort, skills, etc. The participants then rated their feelings and interaction with the confederates, using both of the previous subscales of the Interpersonal Attraction Scale. The experimenter took the participants’ blood pressure at the beginning of the task, as well as after the confederates spoke ill of the participants to measure stress. The participants filled out questionnaires about life satisfaction and their culture, measured on a scale of individualism versus collectivism. In one to two weeks, the participants returned and, again, filled out the subscales of the Interpersonal Attraction Scale, and had their blood pressure taken one final time. The presence of a grudge was determined by assessing whether the participants’ negative feelings towards the confederates still existed.
Though grudge-induction involves deception and instilling negative emotions in participants, there is no other method that allows for experimental testing of grudges. Past research has similarly delved into controversial deception practices; previous studies have induced anger in a laboratory setting through criticizing participants or giving them negative feedback on tasks (Moons & Mackie, 2009; McCoy 2004; Rydell, Mackie, Maitner, Claypool, & Ryan 2008). Additionally, Sommer and Baumeister (2002) primed participants for low self-esteem.

Although this study involved inducing a negative emotion towards the confederates, to ensure that the confederates did not face negative effects from the possibility the participants holding a grudge against them, the confederates and participants attended different colleges. Participants were from Bryn Mawr College and Haverford College, while the confederates all attended Temple University. The confederates were selected on the basis that they have no connection to the either Bryn Mawr College or Haverford College. Thus, the participants had and will have no encounters with the confederates outside the laboratory setting, limiting the negative effects this had on the confederates and the participants.

This study is important for several reasons. Previous research focuses almost exclusively on Western cultures, but the present cross-cultural research is necessary to fully understand friendship, interpersonal interactions, and conflict across culture. However, in the ever-expanding global context and globalization of the world, we must extend research to all cultures, as it has become increasingly important and necessary to engage in cultural dialogues. With heightened relational mobility, greater access to travel, and an increase in interest in exploration of the world, productive dialogue and
communication have become of the utmost importance to succeeding in discussion with people of all different backgrounds. This research is significant in examining these global interactions, and can possibly point to causes of cross-cultural misunderstandings or conflict, and suggest effective strategies for engaging in effective global discussion and interaction. Global interaction is significant in terms of general global issues, as well as in times of war or economic crisis. In times of economic turmoil or worldwide conflicts, global organizations such as the United Nations attempt to step in and communicate with members of countries from all over the world. If proper and productive dialogue is not used, greater conflict and turmoil could ensue.

Additionally, specific countries and cultures continue to foster targeted biases against other cultures or countries. This research could aid in understanding why these grudges continue to exist, even if the relevance and truth of these biases and grudges are questionable. The mechanisms behind holding grudges are alluded to, as well as the effects holding grudges can have on both specific people and cultures. This research also investigated different types of grudges, as this may vary across culture. This may also indicate what people of different cultures take offense to, and what effects these grudges continue to have. Ideally, this research can also indicate productive ways in which these grudges can be overcome.

Several hypotheses were tested in each of the studies. It was hypothesized that participants from individualist cultures would hold stronger grudges, and those they hold will be stronger than those held by participants from collectivist cultures. It was also hypothesized that members of Western cultures, due to the higher likeliness of holding grudges, would be report lower overall life satisfaction.
Specifically in the first study, it was hypothesized that members of individualistic cultures would report more grudges, and the grudges they report would be associated with more negativity and intensity of emotion. Additionally, there would be a strong negative correlation between grudge-holding and higher scores on religiosity. In the second study, it was hypothesized that American participants would report more negative emotions after the manipulation, and harbor those negative feelings upon returning for their follow-up session compared to the East Asian participants. Additionally, the American participants would show greater stress, measured through blood pressure, after the manipulation and in the follow-up session, than the East Asian participants.

**Study One**

**Methods**

**Participants**

The final sample included 285 adults (age range: 18-56): 6 from China, 8 from South Korea, 235 from the United States, 8 from Britain, 11 from Turkey, and 6 from unlisted countries. Participants received $.80 as reward for the completion of the online study. Participants were recruited through an online survey platform, Mechanical Turk (mTurk) administered by Amazon.com, and completed the study through the online software Qualtrics.
Materials

Qualtrics.com. The online survey was created using a free subscription from Qualtrics.com. The survey included a consent form at the beginning, as well as a detailed debriefing form upon completing the survey. Questions were both quantitative and qualitative in nature. The survey had several components: questionnaires about participants’ current grudges (Appendix A), life satisfaction and well-being (Appendix B), and religiousness (Appendix C), as well as a consent form (Appendix D), a basic demographic questionnaire (Appendix E), and a debriefing form (Appendix F).

Measures

Grudge Questionnaire (Appendix A). This is a self-created questionnaire that inquires about participant’s current grudges. This questionnaire was based in large part on the Brennan, Clark, and Shaver (1998) Experiences in Close Relationships Inventory, as well as the Nova Scotia IOWA Connors (NSIC) measure (Yeager, Trzesniewski, Tirri, Nokelainene, & Dweck 2011). Participants are first asked how many grudges they currently have, and are asked to describe up to three in greater detail. For these (up to) three specific grudges, participants are asked to explain what the transgression was, identify the transgressor, and explain why they still hold this grudge. Then there are a series of questions about the relationship between the participant and the transgressor, how often they think about the grudge, and how upset they are about the transgression. These use slightly different 5-point Likert scales.

The Satisfaction with Life Scale (Diener, Emmons, Larson, & Griffin,
1985) (Appendix B). This is a 5-item questionnaire that uses a 7-point Likert scale to measure life satisfaction. It has been used in prior empirical literature, with strong internal consistency (\(\alpha = .82\)) and good test-retest reliability (\(r = .69\)) (Diener et al., 1985). Higher scores on the scale represent greater life satisfaction. The scale was used both in Study 1, as well as in Study 2.

*The Ironson-Woods Spirituality/Religiousness Index* (Ironson, Solomon, Balbin, O’Cleirigh, George, Kumar, & Woods 2002) (Appendix C). This is a 25-item questionnaire that uses a 5-point Likert scale to measure participant religiousness and spirituality. It examines four factors of religiousness and spirituality: sense of peace, faith in God, religious behavior, and compassionate view of others. It has a strong reliability score (\(\alpha = .96\)), as well as very strong test-retest reliability (\(r = .88\)).

**Procedure**

The same survey via Qualtrics software was sent out through Amazon.com’s survey platform mTurk to 5 different countries. mTurk is a web service operated by Amazon.com that allows adults from all over the world to complete tasks and surveys via the Internet. When participants access the survey via mTurk, they first read and signed a consent form (Appendix D), and then completed the survey which included the Grudge Questionnaire, the Life Satisfaction Scale, and the Ironson-Woods Spirituality/Religiousness Index. Participants were lastly asked to answer basic demographic questions. Participants then read a debriefing form (Appendix F), marking the completion of the survey.
Results

In examining the data, a final sample of 285 was used, as 59 participants only partially completed the survey. In analyzing the data, participants were grouped by culture; the Chinese and South Korean participants were grouped together to represent the collectivistic sample, the American and British participants were grouped together to represent the individualistic sample, and the Turkish and “Other” groups were separate. Several analyses were run to compare culture, number of reported grudges, and religiosity. An alpha level of $p < .05$ was used for all analyses conducted.

A one-way between subjects ANOVA was conducted to compare culture and number of reported grudges. While members of individualistic cultures reported holding more grudges ($M = 1.03, SD = 1.39$) than members of collectivistic cultures ($M = .50, SD = .76$), no significant cultural difference between any of the groups and reported number of grudges was found, $F(3, 281) = 1.44, p = .23, n^2 = .02$.

Another one-way between subjects ANOVA was conducted to compare culture and religiosity. The religiosity score was found by taking a composite score of the 25 questions. This score ranges between 1 and 5: 1 is the least religious, while 5 is the most religious. While members of individualistic cultures reported higher scores of religiosity ($M = 3.26, SD = 1.00$) than members of collectivistic cultures, ($M = 3.07, SD = .61$), this finding was not significant, $F(3, 281) = .95, p = .42, n^2 = .01$.

Lastly, a Pearson correlation coefficient was calculated to investigate the relationship between number of reported grudges and religiosity. A weak, negative
correlation that was not significant was found between the number of reported grudges and religiosity $r (283) = -.03, p = .62$.

**Discussion**

The hypotheses for Study 1 were not confirmed. Culture did not significantly impact the number of reported grudges, and there was no relationship between number of grudges held and religiosity. While members of individualistic cultures did report a higher number of grudges, this finding was not significant. Additionally, though the finding was not significant, members of individualistic cultures self-reported themselves as more religious than members of collectivistic cultures in contradiction to hypotheses. Although the finding was insignificant and weak, there was a negative correlation between high religiosity and number of grudges.

**Proposed Explanations and Implications**

The findings reflect that there may not be cross-cultural differences in grudge-holding. This may indicate that, generally, cultural interactions may have more similarities than differences, and that grudge-holding is not influenced by cultural norms. The results could show that viewing yourself as a member of a collective group or seeking to maintain social harmony may not influence the desire to forgive or hold grudges.

Additionally, these results indicate that there may not be a relationship between holding grudges and religiosity. This has interesting cultural and social implications, as
religion often teaches those that practice to be forgiving and inclusive, but those that were reported as more religious did not report holding less grudges. This contradicts with previous findings (Ahmed et al., 2007), though more research needs to be conducted on this topic.

Limitations

This study had significant limitations. The most critical limitation was the severe discrepancy in sample size. There were 243 participants from individualistic cultures, while there were only 14 participants from collectivistic cultures. This greatly impacts the findings, making the validity of the findings questionable. Due to a short timeline and recruiting errors, it was difficult to receive cross-cultural data. The bulk of participants on MTurk appear to be from the United States or other Western cultures, making it difficult to find a valid cross-cultural sample.

Additional limitations stem from using a survey. These results lack strong ecological validity, and rely on accurate self-reporting. Many participants stopped the survey in the middle, demonstrating that many online participants get frustrated with longer surveys, which can often influence the data.
Study Two

Methods

Participants

The final sample included 34 self-identifying East Asian (age range: 18-24 years) and 39 Caucasian American (age range: 18-24 years) female students from Bryn Mawr College and Haverford College. The East Asian participants were from China, South Korea, Taiwan, and Vietnam. Participants were recruited via flyers, word of mouth, and emailed announcements through the Psychology Department ListServ and student organizations. All participants received $10 for completing both parts of the study; they received $3 after completing the first phase of the study, and the remaining $7 upon their return after one to two weeks.

Materials

Rapport Questions. The participant and confederate are given an original list of discussion questions (Appendix G) that involve questions about teamwork and previous experiences in successful or failed partnerships and projects. These questions were constructed based on previous rapport-building literature for the participant’s to self-disclose, as well as discuss past teamwork achievements and failures (Valdesolo & DeSteno, 2011; Webera, Johnson & Corrigane, 2009; Collins & Miller, 1994; Sermat & Smyth, 1973; Vittengl & Holt, 2000).
**Blood Pressure Monitor.** An electronic blood pressure cuff was used to test participant blood pressure before beginning the building task and after the manipulation, as well as when the participants returned for the follow-up.

**Lego Robobot.** A Lego set consisting of 149 pieces and a booklet with instructions on building different types of robots was purchased online at Amazon.com (Appendix H). This building set was used for the second task, in which participants were asked to build the most complicated robot within a 10 minute time period.

**Measures**

*The Satisfaction with Life Scale* (Diener, Emmons, Larson, & Griffin, 1985) (Appendix B). This is a 5-item questionnaire that uses a 7-point Likert scale to measure life satisfaction. The scale was used both in Study 1 and in Study 2.

*The Interpersonal Attraction Scale, Subscales of Social Attraction and Task Attraction* (McCroskey and McCain, 1974) (Appendix I). The subscales of social attraction and task attraction were used from this scale to measure participants’ social liking and task partnership with the confederate. Ten questions were given to measure each subscale. Answers were given off a 7-point Likert scale. Reliability scores for both subscales are very strong, (α=.84) for social attraction and (α=.81) for task attraction. Split-half reliability is also strong for both measures, (α=.90) for social attraction and (α=.87) for task attraction.
Modified Individualism/Collectivism Test (INDCOL) (Triandis, 1995) (Appendix J). This scale was used to measure participant’s cultural background in terms of individualism vs. collectivism. Sixteen questions were asked on a 5-point Likert scale. The reliability scores for the four dimensions are all strong: horizontal-individualism ($\alpha=.67$), vertical-individualism ($\alpha=.74$), horizontal-collectivist ($\alpha=.74$), and vertical-collectivist ($\alpha=.68$).

**Procedure**

Study 2 was a laboratory study with both within-subjects and between-subjects elements. Deception was used, as participants were deceived to believe the study was investigating teamwork in order to attempt to induce a grudge in a laboratory setting.

All participants were run individually along with a culturally-matched confederate (Western confederates with Western participants, Eastern confederate with Eastern participants). The participant and confederate first read and signed consent forms (Appendix K). The first task involved the participant and confederate discussing a list of questions designed to establish rapport and a positive relationship between the two. Six minutes were allotted to allow the confederate and participant to establish a solid foundation. The participant and confederate then took the Interpersonal Attraction Subscale of Social Attraction. The experimenter then took the participant’s and confederate’s blood pressure.

In the second task, the participant and confederate constructed the standard example of the Lego robot. The experimenter “randomly” gave the confederate and participant separate, but equal roles in completing the robot. This was pre-planned, but
the investigator appeared to randomly decide who would fill which role through hesitation and acting. The primary investigator told the confederate to “work with their eyes”, described as looking at the instruction manual and pointing to the pieces for the participant to use. The primary investigator told the participant to “work with their hands”, and actually put the pieces together. The confederate matched the work level and attitude of the participant. They had ten minutes to complete this task. The participant and confederate then completed the Interpersonal Attraction Subscale of Task Attraction.

For the third task, the experimenter asked both the participant and the confederate how they thought the task went, and whether or not the work was evenly divided. The experimenter always asked the participant first, and then asked the confederate who responded negatively about the participants. While the participant always indicated that the task went well, the confederate complained that they completed all of the work, and the participant did not help them build the robot. All answers were given verbally when both the participant and the confederate were present.

The experimenter then separated the confederate and participant, moving the confederate to a separate lab room. The experimenter then took the blood pressure of the participant. The participant then completed both Interpersonal Attraction Subscales again, as well as the Life Satisfaction and INDCOL questionnaires, and basic demographic questions. Finally, the participant engaged in a verbal task about gratitude with the experimenter. The experimenter asked the participant to verbally list three things they are grateful for in their life currently. Studies show that talking about gratitude increases your immediate well-being (Emmons & McCullough, 2003; Watkins, Woodward, Stone, & Kolts, 2003; Froh, Sefick, & Emmons, 2008). Thus, by engaging in an enjoyable task,
and the participant ideally left the lab feeling positively overall, despite the negative experience with the confederate. The experimenter then gave the participant $3 as a reward for their participation. The study required the participant to come back to the lab 1-2 weeks later to complete the remaining tasks.

The participant returned in roughly 1-2 weeks, depending on their schedule, for the follow-up in which they again completed the Interpersonal Attraction Subscales of Social and Task Attraction again, and their blood pressure was measured a third time. The participant received the remaining $7 of their reward and was debriefed by the experimenter (Appendix L). The debriefing procedure involved the researcher thoroughly explaining the exact procedure, hypotheses, and implications of the research, as well as answering all of the questions the participants had. The experimenter gave the participant contact information for the experimenter and faculty advisor in case the participant had any additional questions or concerns following the study.

Results

Data Analysis

In examining the data, the means of the scores on the Social Attraction Task, Task Attraction Task, Individualism/Collectivism Questionnaire, and Life Satisfaction Questionnaire were used to conduct analyses. Blood pressure was analyzed using the systolic reading (the upper number).

Both within subjects and between subjects repeated measure ANOVAs were conducted, as well as several independent-t tests. Within subjects repeated ANOVAs
were used when looking at individual cultural group scores, while between subjects repeated measure ANOVAs were used for comparing the cultural groups. Independent t-tests were used to compare the individualism and collectivism measure and life satisfaction measure between the East Asian and American participants. An alpha level of \( p < .05 \) was used for all tests. Follow-up pairwise tests were run as needed.

**Cross-Cultural Results**

Cross-cultural differences were found. A between-subjects ANOVA was calculated to test cross-cultural differences on the Social Attraction Task. An alpha level of \( p < .05 \) was used for all analyses conducted. A significant effect of culture was found in continued ill-will towards the confederate was observed, \( F(2, 71) = 20.82, p = .00, \eta^2 = .28 \). Analyses revealed that the American participants’ rated the confederates significantly less socially positive at test time one (\( M = 5.15, SD = .65 \)), test time two (\( M = 3.70, SD = .98 \)), and at test time three (\( M = 3.73, SD = .47 \)) compared to the East Asian sample respectively at test time one (\( M = 5.49, SD = .52 \)), test time two (\( M = 4.81, SD = .76 \)), and test time three (\( M = 4.47, SD = .81 \)).

While the hypothesis that the grudge-inducing manipulation was more salient in the American sample was confirmed, the American participants’ scores neutralized between test time two and test time three, while the Asian samples’ scores decreased more between test time two and three. However, the American participants’ scores went from positive to negative, while the Asian participants’ scores went from fairly positive to somewhat positive/neutral, suggesting that they may not be holding ill-will against the
confederate in contrast to the American sample. These results are reflected in figure 1 (Appendix M).

Similar findings were revealed in the Task Attraction Task analysis. A between-subjects repeated measures ANOVA was used to compare the scores on the Task Attraction Task between the American and East Asian samples. A significant effect of culture on the task responses was found, $F(2, 71) = 6.93, p = .01, \eta^2_p = .09$. Further analyses revealed that the American participants rated the confederates less positively on the task at test time one ($M = 6.17, SD = .53$), test time two ($M = 5.26, SD = .79$), and at test time three ($M = 5.20, SD = .73$) compared to the East Asian sample respectively, at test time one ($M = 6.35, SD = .55$), test time two ($M = 5.83, SD = .65$), and time three ($M = 5.53, SD = .71$). These findings are reflected in figure 2 (Appendix N).

Another follow-up analysis was conducted to look specifically at Task Attraction question 10, “She would be fun to work with.” This additional between-subjects repeated measures ANOVA was run, as the scores did not generally vary on the other questions as much, as they were more objective about the task at hand, while this question was much more subjective. A significant cultural effect was found, as the American participants rated the confederate more negatively, $F(2, 71) = 21.03, p = .00, \eta^2_p = .23$. The American participants rated the confederate as less enjoyable to work with at test time one ($M = 5.15, SD = 1.18$), test time two ($M = 3.28, SD = 1.62$), and test time three ($M = 3.26, SD = 1.62$) compared to the East Asian participants at test time one ($M = 6.00, SD = .95$), test time two ($M = 4.85, SD = 1.40$), and test time three ($M = 4.68, SD = 1.32$).

In testing the hypothesis that holding grudges would correlate with higher stress, a between-subjects repeated measures ANOVA was conducted to compare American and
East Asian participants’ blood pressure before the manipulation, immediately after, and upon their follow-up. Culture did have a significant effect on blood pressure, \( F(2, 71) = 14.39, p = .00, \eta^2 = .17 \). Significant differences were found between the groups at test time one, test time two, and test time three respectively. American participants had higher blood pressure at test time one \((M = 108.77, SD = 9.39)\), test time two \((M = 115.36, SD = 13.41)\), and test time three \((M = 112.85, SD = 11.60)\), compared to the Asian sample at test time one \((M = 102.50, SD = 7.71)\), test time two \((M = 104.15, SD = 9.20)\), and test time three \((M = 107.79, SD = 9.59)\).

The hypothesis that greater grudge-holding would correlate with lower life satisfaction was not confirmed. Two separate Pearson correlation coefficients were calculated to investigate the relationship between life satisfaction and grudge-holding (using the participants’ composite scores on the Social Attraction Task at test time three). In comparing American participants’ life satisfaction and grudge-holding, a weak, insignificant correlation was found, \( r(37) = .01, p = .94 \). In comparing Asian participants’ life satisfaction and grudge-holding, again, a week, insignificant correlation was found, \( r(32) = .16, p = .37 \). However, an independent t-test (significance level of \( p < .05 \)) was run, finding that American participants \((M = 5.24, SD = .95)\) reported greater life satisfaction than East Asian participants \((M = 4.79, SD = 1.20)\). This finding was significant, \( t(71) = 1.77, p = .01, d = .47 \).

Lastly, a second independent t-test was conducted to examine the differences in the self-reporting Individualism/Collectivism Questionnaire. It was found that there was no significant difference in individualism and collectivism between the American
participants ($M = 2.45, SD = .44$) and the East Asian participants ($M = 2.54, SD = .33$). The t-test was not significant, $t (71) = -.96, p = .33, d = -.37$.

**American Participants**

In examining the American participants, several within subjects repeated measures ANOVAs were conducted. First, the scores on the Social Attraction Task at time one, time two, and time three were compared. Significant results were found $F (1, 37) = 83.71, p = .00, \eta^2_p = .69$. American participants had significantly lower scores on the task at test time two and test time three, compared to test time one. Follow-up pairwise t-tests were conducted to compare the scores at each test time. In comparing the American participants’ social scores at test time one with test time two, results were significant $t (38) = 11.18, p = .00$. Similarly, there was a significant difference in the American participants’ social scores at test time one and test time two, $t (38) = 9.93, p = .00$. However, there was not a significant difference in the American participants’ social scores at test time two and three, $t (38) = -.30, p = .76$.

Similarly, another within subjects repeated ANOVA was conducted to examine the American participants’ scores on the Task Attraction Task at test time one, two, and three. The results were significant, as there was a significant difference in scores between test time one, two, and three $F (1, 37) = 52.67, p = .00, \eta^2_p = .58$. Follow-up pairwise t-tests were conducted to compare the participants’ task scores at each test session. Significant differences were found in the American participants’ task scores between test time one and test time two, $t (38) = 7.62, p = .00$, as well as between test time one and test time three, $t (38) = 8.20, p = .00$. However, there was no significant
difference between the American participants’ task scores at test time two and test time three, \( t(38) = .87, p = .39 \).

Lastly, a third within subjects repeated measures ANOVA was calculated to compare American participants’ blood pressure at test times one, two, and three. Results were significant between test time one and two, \( F(1, 37) = 5.80, p = .04, \eta^2 = .10 \).

**East Asian Participants**

Similar to the analyses conducted on the American sample data, several within-subjects repeated measures ANOVAs were conducted. First, the East Asian participants’ scores on the Social Attraction Task were analyzed. The scores between test times one, two, and three were all significantly different, \( F(1, 32) = 61.27, p = .00, \eta^2 = .65 \). Follow-up pairwise analyses showed that East Asian participants’ social scores at test time one and test time two differed significantly, \( t(33) = 7.14, p = .00 \). There was also a significant difference in the East Asian participants’ social scores at test time one and test time three, \( t(33) = 7.83, p = .00 \). However, in contrast with the American sample, the East Asian social scores also significantly differed between test time two and test time three, \( t(33) = 3.15, p = .00 \).

Results of a within-subjects repeated measures ANOVA yielded significant compare the East Asian participants’ scores at test time one, test time two, and test time three on the Task Attraction Task. Again, the scores between test times one, two, and three were all significantly different, \( F(1, 32) = 86.83, p = .00, \eta^2 = .73 \). Additional pairwise analyses conducted found there was a significant difference between the East Asian participants’ task scores between test times one and two, \( t(33) = 6.82, p = .00 \), test
times one and three, $t(33) = 23.26, p = .00$, and test times two and three, $t(33) = 16.97, p = .00$.

Lastly, a within-subjects repeated measures ANOVA was run to compare the East Asian participants’ blood pressure at test times one, two, and three. A significant difference in blood pressure was only found between times 1 and 3, $F(1, 32) = 7.29, p = .00$, $\eta^2 = .18$.

**Discussion**

Significant cross-cultural differences were found. The data confirmed that the American participants reacted more negatively to the manipulation, and thus carried ill-will towards the experimenter, shown in the negative ratings towards the confederate on both the Social Attraction and Task Attraction questionnaires. However, the East Asian participants’ scores decreased significantly after the follow-up, while the American participants’ scores stabilized negatively. While this suggests that the East Asian participants are more likely to hold grudges, they still rated the confederates highly on both task questionnaires, showing no signs of ill-will, but rather neutral to low positive feelings about the confederate.

Significant results were also found in the other factors in which this study was interested. Stress, measured through blood pressure, was shown to be higher at each time for the American participants compared to the Asian participants. However, greater differences were found in blood pressure. While the East Asian participants’ blood pressure increased each time it was measured, the American participants’ blood pressure
was highest right after the manipulation, though it was still higher when they came back for the follow-up than at test time 1.

Additionally, significant results were found in comparing the American and East Asian participants’ scores on the self-report measure of life satisfaction. Results contradicted hypotheses, as grudge-holding was not correlated with lower life satisfaction- in fact, the reverse was found to be true. The American participants rated themselves as significantly more satisfied with life as compared to the East Asian participants.

Lastly, the self-report Individualism/Collectivism measure provided interesting and contradictory results. Though the East Asian sample did self-report as more collectivistic than the American sample, this finding was not significant, as the scores on the questionnaire were fairly similar.

**Proposed Explanations and Implications**

The findings support the claim that culture, specifically the cultural trait of individualism and collectivism, affects group dynamics and conflict in the realm of grudge-holding. As suggested, members of individualistic cultures take greater offense to a rude comment, and hold a grudge, particularly negative emotions, towards the commenter. While the East Asian participants did not appear to hold onto negative ill-will towards the confederates, it is still significant to mention that their opinions of the confederates did decrease over time.

These results have great implications in terms of social and group dynamics, particularly cross-culturally. These findings reflect that Americans and members of
individualistic cultures tend to both get angered more easily, as well as hold onto that negative energy. This suggests that, indeed, members of individualistic cultures do take perceived negative situations more personally and as more offensive compared to collectivistic members. This also reflects that collectivistic members are both less likely to take offense when a member of their cultural group offends them, or hold any ill-will towards them. While a member of a collectivistic culture may not have strong positive feelings towards someone who wrongs them, they do not harbor negative feelings towards them.

The self-report data on life satisfaction also provides intriguing insight into the effects of grudge-holding. Findings suggest that grudge-holding and taking greater offense does not actually affect overall life satisfaction, in fact, the American participants cited significantly more life satisfaction. This finding is justified, however, in that the questionnaire was directed towards personal and goal-oriented happiness, which is the Western ideal of happiness compared to the Eastern construct of happiness which focuses on happiness in terms of social groups (Rego & Cunha, 2009; Uchida, Norasakkunkit, & Kitayama, 2004; Suh, Diener, Oishi, & Triandis, 1998). Happiness has also been shown to correlate with individualism as a trait emphasized in Western countries (Diener & Diener), specifically in terms of self-esteem and personal happiness (Oishi, Diener, Lucas, & Suh, 1999). The Life Satisfaction Questionnaire, though a valid measure of well-being, does have a greater focus on Western, individualistic aspects of happiness than Eastern, collectivistic aspects of well-being.

This finding has interesting suggestions for the idea of forgiveness. Often in Western cultures, forgiveness has been lauded for improving mental and emotional health
CROSS-CULTURAL DIFFERENCES IN GRUDGE-HOLDING

(McCullough, Bellah, Kilapatrick, & Johnson, 2001; McCullough, 2001; Karremans, Van Lange, Ouwerkerk, & Kluwer, 2003). However, these results suggest that grudge-holding may not negatively affect overall life satisfaction. However, the grudge was over a short time span and was not as deep-seated as many real-life grudges tend to be, which may influence findings. This conclusion also contradicts with the stress findings; American participants’ had higher blood pressure, particularly after the manipulation, as compared to the East Asian participants. This suggests that initial anger and resulting ill will may increase stress, but this stress does not, in general, affect overall happiness and life satisfaction.

Lastly, contradictory results were found on the Individualism/Collectivism Questionnaire. American participants and East Asian participants did not self-report themselves to differ in terms of individualism and collectivism. However, there were clear cultural differences in their scores and in the results. This finding has several implications. First, students may have been more likely to self-report themselves to be more inclusive than they actually are. Second, the questionnaire associated the trait of “competitive” with individualistic. While individualistic cultures do tend to be more competitive, possibly stemming from economic and politically conservative cultural and social norms and policies, there are other group dynamics that occur that are individualistic and not associated with competition. Members of individualistic cultures may not be competitive individuals, nor see themselves as part of a collective group.

Third, all participants attend either Bryn Mawr or Haverford College- two colleges whose identities are closely linked to community and looking out for others. The colleges are both very self-selecting in that they have both academic and social honor
codes that emphasize community values such as trust, concern, and respect. This means that many of the American participants may not self-report or view themselves as competitive, and may view themselves as in touch with more collectivistic values.

Lastly, this also reflects the self-report nature of the questionnaire. This suggests that while the American participants did not associate themselves with individualistic cultural norms, these cultural norms are likely very ingrained in their behavior, thus impacting their scores on the tasks and their blood pressure. This suggests that cultural norms are likely to be deep-seated and highly ingrained, and that we may be unable to detect culturally-linked behavior, though we likely do often react in culturally-manipulated ways. Again, this reflects the significance of culture on humans—personally, behaviorally, and emotionally.

Limitations

Though the current research found many significant findings, there were some limitations to these findings. Firstly, the sample sizes were not even, nor remotely large enough to accurately depict all members of these large cultures. Additionally, not all of the East Asian participants were distinctly East Asian; five of the East Asian participants were actually born and either fully raised or partially raised in the United States. This could have impacted findings, as many of them when reflecting on the study during the debriefing, explained that they themselves believe that they have many Western norms instilled in them now. Similarly, in attending school in a Western country, they are likely to either identify with some Western and likely individualistic cultural norms, or adapt them. This may have impacted findings as well.
As previously mentioned, all participants were from Haverford and Bryn Mawr College, which has a large emphasis on community and social harmony. This likely affected the scores on not only the Individualism/Collectivism Questionnaire, but likely in the reactions to the deception. Similarly, many of the American participants, to varying degrees, believed or were suspicious that the confederate was in fact a confederate. This again likely affected results, as participants who were more certain that the confederate was indeed a confederate rated her quite highly, both after the manipulation and upon returning for the follow-up.

Another limitation in the study was the lack of a control group. The study would have been stronger if there was a control group that was not manipulated to hold a grudge against a confederate to test their feelings towards the confederates after each stage of the experiment. However, due to timing and sampling, this was not a feasible option.

Lastly, due to the nature of the study and ethical concerns within the bi-college community, the deception was short-lived; many of the participants returned to the lab for their follow-up just a week or 6 days after the initial experiment, which did not give a long timeline to see if the grudge still existed. The results would be more influential if the participants were able to be deceived for longer, for three or even four weeks, to see how strong the grudge would be later. However, due to negative side-effects the participants may have faced, scheduling issues with the participants, and the limited timeline of the research, they had to be debriefed after just 1-2 weeks.
General Discussion

The present research aimed to investigate the cross-cultural differences in holding grudges between East Asian, collectivistic culture and Western, individualistic culture. Correlations between grudge-holding and religiosity, stress, and well-being were also considered. Previous research has begun to examine grudge-holding, though this was the first study to investigate cross-cultural grudge-holding, as well as attempt to induce a grudge via manipulation and deception in an experimental setting.

Results, whether supporting the various hypotheses or not, were significant and meaningful. While Study 1 did not show significant cross-cultural results, due to the lack of a strong and valid sample size as well as ecological validity, Study 2 had extremely significant cross-cultural findings. This indicates that there are likely cross-cultural differences in holding-grudges, but much more research needs to be conducted.

Further research should be conducted looking at members currently living, and having lived, in the distinct countries. More accurate findings could be found if this study was replicated in the specific countries with participants living in those countries. Additionally, research should be done with non-student populations, or with students who do not attend a community based and valued college consortium. Greater research could be done both following an experimental design, or using the Grudge Questionnaire, though experimental research may hold more ecological validity with less sampling errors.
Further research could also be done on a greater longitudinal scale. For example, research could be done in a similar academic setting, but last an entire semester, or non-student participants could return to the lab after a month or longer. Additionally, in these studies, grudges could be attempted to be induced using different techniques. While this study used teamwork as the over-arching deception, many other partner-based exercises could be created to attempt to induce a grudge against a confederate.

Lastly, further research should continue to investigate the correlation between grudge-holding and stress and well-being, as these have great implications for both mental and physical health. In individualistic cultures, members are taught to forgive and let go in order to have less stress and improve mental health. These findings contradict such ideas, implying the holding onto anger does not greatly affect mental health and well-being, and does not dramatically effect overall stress (or that the stress that comes from grudge-holding does not actually impact overall happiness).

Current events and cultural ideas, such as the new Western fad of meditation and emotional healing, could be dramatically impacted by such findings. These findings may suggest that holding onto anger could be a driving force in well-being and happiness. More significantly, interactions between cultures, both between group members, as well as entire countries, could be impacted by these findings. Current international situations, such as locating the Malaysian plane and the conflict between Russia and the United States, may be aided by understanding different group and cultural dynamics. Additionally, this may also help in understanding how to best support different countries undergoing group conflict, such as recently in Syria, Egypt, and Ukraine. By understanding how different cultures interact both within their own group and towards
other groups could lead to greater international understanding of these conflicts and the
best ways in which conflicts can be assisted, overcame, or avoided. Due to these findings,
we must ask how we can best relate to members of other cultural groups, but also, how
we can best relate to those within our own cultural group and what these interactions say
about our life and behavior.

Acknowledgements

This thesis would not have been possible without the continual support and guidance of
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References


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Appendices
Appendix A

Grudge Questionnaire

For this questionnaire, please think about current grudges you are holding against specific people in your life. Please be as honest and detailed as possible, but do not use first or last names.

1. Approximately how many grudges are you currently holding? _____

For every grudge you are currently holding (up to 3) please answer the following questions:

2. Please explain one grudge you are currently holding (who it is against, what happened, why you are holding a grudge still, and your relationship since the incident). Please write a minimum of 150 words.

Using the following scale, please rate your relationship with this person…

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Negative</td>
<td>Negative</td>
<td>Neutral</td>
<td>Positive</td>
<td>Very Positive</td>
</tr>
</tbody>
</table>

3. Before the incident: 1 2 3 4 5
4. After the incident: 1 2 3 4 5

Please use the scale (5 is very strong, 1 is very weak) to answer the following:

5. How strong is your grudge towards this person? 1 2 3 4 5

Please use the scale to answer the following:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Almost Never</td>
<td>Occasionally</td>
<td>Often</td>
<td>Always</td>
</tr>
</tbody>
</table>

6. How frequently do you think about the grudge? 1 2 3 4 5

Please check off all the emotions that you feel towards the person in the following situations…

- Anger
- Sadness
- Pleasantness
- Guilt
- Closeness
7. Before the incident
8. During the incident
9. After the incident

Please explain one grudge you are currently holding (who it is against, what happened, why you are holding a grudge still, and your relationship since the incident). Please write a minimum of 150 words.

2.

Using the following scale, please rate your relationship with this person…

1       2        3       4             5
Very Negative        Negative            Neutral            Positive             Very Positive

3. Before the incident: 1 2 3 4 5
4. After the incident: 1 2 3 4 5

Please use the scale (5 is very strong, 1 is very weak) to answer the following:

5. How strong is your grudge towards this person? 1 2 3 4 5

Please use the scale to answer the following:

1       2            3          4           5
Never             Almost Never       Occasionally         Often                Always

6. How frequently do you think about the grudge? 1 2 3 4 5

Please check off all the emotions that you feel towards the person in the following situations…

Anger     Sadness     Pleasantness     Guilt

Closeness

7. Before the incident
8. During the incident
9. After the incident
Please explain one grudge you are currently holding (who it is against, what happened, why you are holding a grudge still, and your relationship since the incident). Please write a minimum of 150 words.

3.

Using the following scale, please rate your relationship with this person…

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
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<td>Negative</td>
<td>Neutral</td>
<td>Positive</td>
<td>Very Positive</td>
</tr>
</tbody>
</table>

3. Before the incident: 1 2 3 4 5
4. After the incident: 1 2 3 4 5

Please use the scale (5 is very strong, 1 is very weak) to answer the following:

5. How strong is your grudge towards this person? 1 2 3 4 5

Please use the scale to answer the following:

<table>
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<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>Never</td>
<td>Almost Never</td>
<td>Occasionally</td>
<td>Often</td>
<td>Always</td>
</tr>
</tbody>
</table>

6. How frequently do you think about the grudge? 1 2 3 4 5

Please check off all the emotions that you feel towards the person in the following situations…

<table>
<thead>
<tr>
<th>Anger</th>
<th>Sadness</th>
<th>Pleasantness</th>
<th>Guilt</th>
<th>Closeness</th>
</tr>
</thead>
</table>

7. Before the incident

8. During the incident

9. After the incident
Appendix B

The Satisfaction with Life Scale (Diener, Emmons, Larson, & Griffin, 1985)

Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number in the line preceding that item. Please be open and honest in your responding.

1 = Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Neither Agree or Disagree
5 = Slightly Agree
6 = Agree
7 = Strongly Agree

______ 1. In most ways my life is close to my ideal.
______ 2. The conditions of my life are excellent.
______ 3. I am satisfied with life.
______ 4. So far I have gotten the important things I want in life.
______ 5. If I could live my life over, I would change almost nothing.
Appendix C

The Ironson-Woods Spirituality/Religiousness Index (Ironson et al., 2002)

Instructions

On the following pages you will be asked to respond to a number of statements. You have the choice of: agreeing with each statement, strongly agreeing, disagreeing, strongly disagreeing, or neither agree or disagree. Please circle the appropriate number that best corresponds to your personal opinion by circling it.

Please respond to the following statements. In each case please circle the number which best reflects your personal opinion.

1. My beliefs give me a sense of peace.  
   strongly disagree  strongly agree
   1 2 3 4 5

2. My beliefs help me to know everything will be fine.  
   strongly disagree  strongly agree
   1 2 3 4 5

3. My beliefs give meaning to my life.  
   strongly disagree  strongly agree
   1 2 3 4 5

4. My beliefs help me to be relaxed.  
   strongly disagree  strongly agree
   1 2 3 4 5

5. My beliefs help me feel protected.  
   strongly disagree  strongly agree
   1 2 3 4 5

6. My beliefs help me feel I am not alone.  
   strongly disagree  strongly agree
   1 2 3 4 5

7. My beliefs help me feel I have a relationship or a connection with a higher form of being.  
   strongly disagree  strongly agree
   1 2 3 4 5

8. My beliefs help me be less afraid of death.  
   strongly disagree  strongly agree
   1 2 3 4 5

9. I believe my soul will live on in some form after my body dies.  
   strongly disagree  strongly agree
   1 2 3 4 5

10. I believe God created all things in the universe.  
    strongly disagree  strongly agree
       1 2 3 4 5
11. God will not turn his back on me no matter what I do.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

12. When I am ill, God gives me courage to cope with my illness.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

13. When I am ill, God will answer my prayers for a recovery.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

14. My beliefs are very influential in my recovery when I am ill.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

15. When I am ill, my faith gives me optimism that I will recover.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

16. I attend religious services.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

17. I participate in religious rituals.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

18. I pray or meditate to get in touch with God.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

19. I discuss my beliefs with others who share my belief.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

20. My beliefs give me a set of rules I must obey.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

21. My beliefs teach me to help other people who are in need.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

22. My beliefs help me feel compassion/love/respect for others.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

23. I have a responsibility to help others.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

24. My beliefs increase my acceptance and tolerance of others.  
   strongly disagree          strongly agree  
   1                      2            3            4            5

25. I feel I am connected to all humanity.  
   strongly disagree          strongly agree  
   1                      2            3            4            5
Appendix D

Consent Form (Study 1)

Title: Cross-Cultural Differences in Holding Grudges
Researcher: Leigh Kloss
Haverford College

The purpose of the present study is to investigate cross-cultural differences in holding grudges. Your answers will be used to represent your culture and the ways in which grudges are held and the reasoning behind them.

This research will help us understanding differences in interpersonal interactions across cultures. In this study, you will first fill out a questionnaire that includes both quantitative and qualitative questions about holding grudges. Next, you will fill out a short questionnaire about your life satisfaction. Lastly, you will fill out a questionnaire about your personal religiousness and spirituality. After you complete the three questionnaires, you will be given more information about the hypotheses and an extended explanation of the research.

At any time during the study, you may choose to withdraw from the study, and no additional information will be gathered from you. If you choose to withdraw, you may also indicate that you do not want to have any of your previously answered questions used for the study. Additionally, you do not have to answer any questions that you do not want to answer.

This study will take place from December 1, 2013 until February 1, 2014. The duration of each individual survey is roughly 45 minutes. Approximately 200 adults will complete this study.

Questions: Should you have any questions pertaining to the study, the procedure, or your rights as a participant, please feel free to contact the main researcher, Leigh Kloss, through email at lkloss@haverford.edu. The faculty advisor for this research is Dr. Louisa Egan Brad, and she can be reached through email at leganbrad@brynmawr.edu, or by office telephone at 610-526-5038. We have tried to eliminate as much risk and discomfort as possible, but do not hesitate to reach out to the experimenters if need be. Additionally, if any discomfort does take place, please contact Bryn Mawr College’s Institutional Review Board by telephone at 610-526-5298.

Participant Rights: Your participation in this study is voluntary. You are free to decline participation, refuse to answer any questions, or withdraw from the study at any point.

Compensation: For your participation in this study, you will be compensated $.25 (USD).

Confidentiality: This is a confidential study. Your answers to these questions will remain anonymous. Though as an online participant, there is always a risk of intrusion (such as hacking) and your identity being revealed, the data collected in this study will be transmitted to an encrypted format to safeguard against potential hacking or intrusions. This will also ensure that data cannot be decoded, and will therefore be
unable to be tracked to a specific participant. While there is no absolute guarantee that your results will remain confidential, we have safeguarded the data as much as possible. The only people who will be able to review the data are the main researcher (Leigh Kloss) and the Bryn Mawr College Institutional Review Board. By law, they are required to maintain complete confidentiality regarding your identity. If individual results are discussed, your identity will be protected by using a code number, rather than any identifying information. The results of this may be used for further research, publications, presentations, or teachings.

Do you consent to participating in this study?

☐ Yes, I consent to participating in this study.

☐ No, I do not consent to participating in this study.
Appendix E

Demographic Questions

1. Please check the corresponding box with your age:

☐ 18-24  ☐ 25-30  ☐ 30-35  ☐ 36-40  ☐ 41-45  ☐ 46-50  ☐ 51-55  ☐ 56+

2. In what country were you born?
☐ China  ☐ South Korea  ☐ Turkey  ☐ Britain  ☐ United States  ☐ Other:___________

3. In what country do you currently reside in?
☐ China  ☐ South Korea  ☐ Turkey  ☐ Britain  ☐ United States  ☐ Other:___________

4. Please check the corresponding box with your identified gender:
☐ Male  ☐ Female  ☐ Other
Thank you for your participation in this study. Your participation plays an integral role in investigating cross-cultural differences in holding grudges. The study aims to find differences in holding grudges in collectivist cultures and individualistic cultures.

**Hypotheses:** Two hypotheses were tested. We first hypothesized that there will be a strong correlation between grudge-holding and lower religiousness and life satisfaction. Second, we hypothesized that cultures with higher collectivist scores will be more forgiving, and will have higher scores in religiousness and life satisfaction.

**Importance:** This research is important to understand cultural differences in interpersonal relationships and interactions. This insight will help us improve cross-cultural relationships, and develop strong, more meaningful relationships with people from various cultures. These results could also have greater implications for global and social interactions.

For more information, or for comments or questions, feel free to contact the principal investigator, Leigh Kloss at lkloss@haverford.edu or the faculty advisor, Dr. Louisa Egan Brad at leganbrad@brynmawr.edu. Additionally, you can contact the Bryn Mawr College Institutional Review Board via telephone at 610-526-5298.

Thank you for your participation.
Appendix G

Rapport Questions

Together, please discuss these questions. Please be as open and honest as possible.

1. What previous teamwork experiences have you had?
2. When in the past has a teammate let you down?
3. Describe one situation where you were successful on a team.
4. Describe one situation where you failed your team and/or teammates.
5. What are your strengths when working on a team?
6. What are your weaknesses when working on a team?
7. Have you ever played a team sport or been involved in other teamwork competitions?
8. What qualities do successful teams have?
9. What constitutes a bad team member?
10. What constitutes a good team member?
Appendix H

Lego Robobot used in Study 2, purchased through Amazon.com
Appendix I

The Interpersonal Attraction Scale, Subscales of Social Attraction and Task Attraction (McCroskey and McCain, 1974)

Below are twenty statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number following that item. Please be open and honest in your responding.

1 = Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Neither Agree or Disagree
5 = Slightly Agree
6 = Agree
7 = Strongly Agree

Social Attraction

1. I think she could be a friend of mine. 1 2 3 4 5 6 7
2. I would like to have a friendly chat with (her). 1 2 3 4 5 6 7
3. It would be difficult to meet and talk with her. 1 2 3 4 5 6 7
4. We could never establish a personal friendship with each other. 1 2 3 4 5 6 7
5. She just wouldn't fit into my circle of friends. 1 2 3 4 5 6 7
6. She would be pleasant to be with. 1 2 3 4 5 6 7
7. I feel I know her personally. 1 2 3 4 5 6 7
8. She is personally offensive to me. 1 2 3 4 5 6 7
9. I don't care if I ever get to meet her. 1 2 3 4 5 6 7
10. I sometimes wish I were more like her. 1 2 3 4 5 6 7
Task Attraction

11. I couldn't get anything accomplished with her. 1 2 3 4 5 6 7
12. She is a typical goof-off when assigned a job to do. 1 2 3 4 5 6 7
13. I have confidence in her ability to get the job done. 1 2 3 4 5 6 7
14. If I wanted to get things done I could probably depend on her. 1 2 3 4 5 6 7
15. She would be a poor problem solver. 1 2 3 4 5 6 7
16. I think studying with her would be impossible. 1 2 3 4 5 6 7
17. You could count on her getting a job done. 1 2 3 4 5 6 7
18. I have the feeling she is a very slow worker. 1 2 3 4 5 6 7
19. If we put our heads together I think we could come up with some good ideas. 1 2 3 4 5 6 7
20. She would be fun to work with. 1 2 3 4 5 6 7
Appendix J

Modified Individualism/Collectivism Test (INDCOL) (Triandis, 1995)

Please follow the instructions carefully and honestly. The questions are on a five-point scale, so please circle whichever answer corresponds to your personal opinion.

1. My happiness depends very much on the happiness of those around me.
   Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

2. Winning is everything.
   Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

3. It annoys me when other people perform better than I do.
   Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

4. It is important for me to maintain harmony within my group.
   Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

5. It is important to me that I do my job better than others.
   Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

6. I like sharing little things with my neighbors.
   Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

7. I enjoy working in situations involving competition with others.
   Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree
8. The well-being of my co-workers is important to me.
Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

9. If a relative were in financial difficulty, I would help within my means.
Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

10. Competition is the law of nature.
Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

11. If a co-worker gets a prize I would feel proud.
Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

12. To me, pleasure is spending time with others.
Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

13. When another person does better than I do, I get tense and aroused.
Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

14. Without competition it is not possible to have a good society.
Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

15. I feel good when I cooperate with others.
Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree

16. Some people emphasize winning; I am not one of them.
Strongly Agree  Agree  No Opinion  Disagree  Strongly Disagree
Appendix K

Consent Form (Study 2)

CONSENT FORM

Interpersonal Attitudes
Principal Investigator: Leigh Kloss
Faculty Supervisor: Dr. Louisa Egan Brad
Bryn Mawr College, Department of Psychology

2) Purpose and General Overview:

Haverford undergraduate senior thesis researcher Leigh Kloss is performing the current study under the supervision of Dr. Louisa Egan Brad at Bryn Mawr College to investigate how people work in teams. Specifically, we’re looking at how people interact when working toward a common goal and how teamwork shapes individuals’ understandings of their goal and their teammates. This research will help us understand teamwork and how it affects people’s interactions and interpersonal impressions. This study will take place from February 1, 2014 until March 31, 2014. Approximately 80 undergraduate women will be recruited from Bryn Mawr College and Haverford College for participation through fliers, online announcements, and emails to students.
3) What does participation involve?:

This study involves two sessions in Bettws-y-Coed at Bryn Mawr College or Sharpless Hall at Haverford College. The duration of the first session is approximately 60 minutes, and the duration of the second session is approximately 10 minutes. In the first session, you will first have your blood pressure measured, and then you will discuss previous teamwork experiences with a partner. Next, you will fill out a short questionnaire about your partner. Then, you and your partner together will construct a Lego robot. After this activity, you will fill out a questionnaire about the task and working with your partner and verbally discuss your experience with the task and your partner. Your blood pressure will be measured a second time. You will complete a questionnaire about your experience and your personal cultural identity. Lastly, you will engage in a verbal task about gratitude and receive your compensation. In the second session, you will fill out additional follow-up questionnaires about your experience and your blood pressure will be measured a final time. After your second session, you will be debriefed and

At any time during the study, you may choose to withdraw from the study, and no additional information will be gathered from you. If you choose to withdraw, you may also indicate that you do not want to have any of your previously answered questions used for the study. Additionally, you do not have to answer any questions that you do not want to answer, nor participate in any tasks in which you do not want to participate.

This is a confidential study. Though as a participant there is always a risk of your identity being revealed, the data collected in this study will be
kept confidential, and you will be referred to by a code number, rather than a name. While there is no absolute guarantee that your results will remain confidential, we have safeguarded the data as much as possible. The only people who will be able to review the data are the main researcher (Leigh Kloss) and her faculty advisor at Bryn Mawr College (Louisa Egan Brad). If individual results are discussed, your identity will be protected by using a code number, rather than any identifying information. The results of this study may be used for further research, publications, presentations, or for teaching.

5) Risks of participating in the study:

Though the experimenter has minimized as much risk as possible, some discomfort may be experienced. While there is no physical discomfort, there is potential for psychological or emotional discomfort. Specifically, embarrassment or anger may be experienced. If you experience any discomfort in the study--during the first session, during the second session, or between the two sessions--you may withdraw immediately. To do so, please let the Principal Investigator (Leigh Kloss, lkloss@haverford.edu) know and she will debrief you. If you desire to withdraw between the two sessions, please contact the Principal Investigator with your phone number and she will debrief you by phone. The debriefing procedure will explain why these risks were seen as necessary by the researcher. The researcher will be able to answer any of your questions or concerns during or after your participation. Additionally, the Bryn Mawr College Counseling Services are available if need be. They have daytime hours Monday through Friday 9 am to 7 pm, as well
as on Saturday and Sunday from 9 am to 2 pm. If you need to speak to someone after hours, they have an after hours service, ProtoCall, which can be reached at 610-526-7778 to speak with an on-call counselor.

6) Benefits to participants and others:

There are no direct benefits for participating; your participation may be beneficial to the field of psychology as well as to future similar areas of concern.

7) Compensation:

For your participation in this study, you will be compensated $10 (USD). You will receive $3 upon completion of the first session of the study and $7 upon completion of the second session.

8) Deception:

The full purpose of the study will be revealed to you at the end of this study. We do not anticipate that there will be greater risks than outlined above.

9) Voluntary Participation:

Your participation in this study is completely voluntary. You can withdraw from the study at any time. You do not have to answer any questions that you don’t want to answer. If you choose not to participate, there will be no penalty or loss of

10) Questions about the research and rights of the participants:
If you should have any questions about the research, the procedure, or your rights as a participant, please feel free to contact the Principal Investigator, Leigh Kloss, through email at lkloss@haverford.edu. The faculty advisor for this research is Dr. Louisa Egan Brad, and she can be reached through email at leganbrad@brynmawr.edu, or by office telephone at 610-526-5010. Additionally, if you have any questions regarding your rights as a research participant, please be in touch with Bryn Mawr College’s Institutional Review Board Chair Leslie Alexander.

I am 18 or older: Yes _____ No______

I have read this consent form or it has been read to me: Yes______ No______

I have been given a copy of this consent form. Yes_____ No________

I agree to participate in this research. Yes______ No_______

Your signature will confirm your consent to the participation in the study. Again, we ensure that your results will remain confidential, and your identity will be protected.

Signature of participant: ______________________ Date: ______________________

Signature of researcher: _______________________ Date: ______________________
Thank you for your participation in this study. Your participation plays an integral role in investigating cross-cultural differences in holding grudges. The study aims to find differences in holding grudges in collectivistic cultures and individualistic cultures.

**Hypotheses:** Two hypotheses were tested. We first hypothesized that there will be a strong correlation between grudge-holding and lower life satisfaction and greater stress. Second, we hypothesized that cultures with higher collectivist scores will be more forgiving, and will have higher scores in life satisfaction and lower stress.

**Importance:** This research is important to understand cultural differences in interpersonal relationships and interactions. This insight will help us improve cross-cultural relationships, and develop strong, more meaningful relationships with people from various cultures. These results could also have greater implications for global and social interactions.

**Deception:** Deception was a necessary element of this study. You were deceived to believe this study was about cross-cultural differences in teamwork, while it was actually looking at cross-cultural differences in holding grudges. The partner that participated in the study with you was a confederate. This allowed us to unbiastly examine inducing a grudge into participants. We were unable to tell participants the real subject of the study, as it would influence participant’s feelings towards the confederate. If you have any questions regarding the deception used in this study, we encourage you to email the principal research at lkloss@haverford.edu, the faculty advisor at leganbrad@brynmawr.edu, or contact the Bryn Mawr College Institutional Review Board via telephone at 610-526-5298.

For more information, or for comments or questions, feel free to contact the principal investigator, Leigh Kloss at lkloss@haverford.edu or the faculty advisor, Dr. Louisa Egan Brad at leganbrad@brynmawr.edu. Additionally, you can contact the Bryn Mawr College Institutional Review Board via telephone at 610-526-5298.

Thank you for your participation.
Appendix M

Figure 1

Cross-Cultural Scores on Social Task

Score

Time 1  Time 2  Time 3

American
Asian
Appendix N

Figure 2

Cross-Cultural Scores on Task Attraction

Time 1 | Time 2 | Time 3
---|---|---
American: 6.35 | 5.83 | 5.53
Asian: 6.17 | 5.26 | 5.2