

**ADULT ATTACHMENT AND SELF-CONSTRUAL:
A CROSS-CULTURAL ANALYSIS**

A Dissertation

by

MICHAEL DAVID FRIEDMAN

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

August 2006

Major Subject: Psychology

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ABSTRACT

Adult Attachment and Self-Construal:

A Cross-Cultural Analysis. (August 2006)

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Chair of Advisory Committee: Dr. W. Steve Rholes

A cross-cultural survey study examined the impact of adult attachment and self-construal on relationship and mental health outcomes in Hong Kong, Mexico, and the United States. Approximately 200 university students (each currently involved in a romantic relationship) from each culture were recruited to participate. Participants completed self-report measures of adult attachment style, self-construal and several questionnaires about their romantic relationships. The dependent measures examined were relationship satisfaction, commitment, and perceived social support, along with the mental health variable of depressive symptoms. Both universal and culture-specific patterns of adult attachment were observed. Attachment insecurity was negatively related to relationship and mental health outcomes in all cultures under study, providing support for a universal interpretation of attachment theory. However, the negative effects of avoidant attachment on relationship outcomes were found to be stronger in Hong Kong and in Mexico. These findings provide support for a degree of cultural specificity to attachment processes. Additional findings centered on self-construal, and showed that

independent self-construal was particularly detrimental to relationship outcomes in Hong Kong. Implications for attachment theory and self-construal research are discussed.

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TABLE OF CONTENTS

	Page
ABSTRACT	iii
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	vii
LIST OF TABLES	x
LIST OF FIGURES	xi
INTRODUCTION AND GENERAL OVERVIEW	1
ATTACHMENT THEORY	4
Attachment and Romantic Relationships	6
Relationship Satisfaction	6
Relationship Commitment and Investment	7
Social Support	7
Seeking	7
Providing	8
Depression	9
Culture and Attachment	10
CULTURAL DIFFERENCES: AN INDIVIDUALISM/COLLECTIVISM SELF-CONSTRUAL APPROACH	15
Self-Construal and Romantic Relationships	17
CULTURAL DIFFERENCES IN THE IMPACT OF ATTACHMENT AND SELF-CONSTRUAL	20
The Role of Cultural Fit	20
Avoidance, Anxiety, Independence and Interdependence: Cultural Matches and Mismatches	24
HYPOTHESES	30
Hypothesis 1: Mean Level Difference of Attachment and Self-Construal	30
Hypothesis 2: Relative Universality of Effects of Adult Attachment	30

	Page
Hypothesis 3: Effects of Self-Construal on Relationship and Mental Health Outcomes	31
Hypothesis 4: Differential Effects of Avoidance on Relationship and Mental Health Outcomes According to Cultural Context	31
Hypothesis 5: Differential Effects of Self-Construal on Relationship and Mental Health Outcomes According to Cultural Context	32
METHOD	33
Participants	33
Materials	33
RESULTS	38
Preliminary Analyses	38
Factor Analysis of the Experiences in Close Relationships Scale	38
Factor Analysis of the Individualism/Collectivism Scale	39
Factor Analysis of the Relationship Satisfaction Scale	40
Factor Analysis of the Investment Model Scale	40
Factor Analysis of the Social Support Scale	41
Factor Analysis of the CESD Depression Scale	41
Correlations Between Avoidance and Anxiety	42
Means and Standard Deviations	42
Mean Level Differences in Attachment and Self-Construal	42
Primary Analyses	44
Relationship Satisfaction	45
Investment Model Scales	47
Social Support	48
Depression	49
Mediation of the Attachment Depression Link by Relationship Positivity	50
DISCUSSION	53
General Psychology, Cultural Psychology, and Cross-Cultural Psychology	64
CONCLUSION	68
NOTES	69
REFERENCES	70
APPENDIX A	86

	Page
APPENDIX B	126
APPENDIX C	135
APPENDIX D	144
VITA	158

LIST OF TABLES

TABLE	Page
1	Exploratory Factor Analysis of the Experiences in Close Relationships (ECR) Scale..... 86
2	Exploratory Factor Analysis of the Individualism/Collectivism (IC) Scale 91
3	Exploratory Factor Analysis of the Relationship Satisfaction Scale..... 94
4	Exploratory Factor Analysis of the Investment Model (IMS) Scale..... 95
5	Exploratory Factor Analysis of the Social Support Scale 98
6	Exploratory Factor Analysis of the CESD Depression Scale 99
7	Means and Standard Deviations by Culture for the Primary Variables 102
8	Regression Coefficients for Analyses of Relationship Satisfaction..... 103
9	Regression Coefficients for Analyses of Investment Model Scales 105
10	Regression Coefficients for Analyses of Social Support 107
11	Regression Coefficients for Analyses of Depression..... 109

LIST OF FIGURES

FIGURE	Page
1	US-Hong Kong Contrast by Avoidance Interaction: Relationship Satisfaction..... 111
2	US-Mexico Contrast by Avoidance Interaction: Relationship Satisfaction..... 112
3	US-Hong Kong Contrast by Anxiety Interaction: Relationship Satisfaction..... 113
4	US-Mexico Contrast by Anxiety Interaction: Relationship Satisfaction 114
5	US-Hong Kong Contrast by Independent Self-Construal Interaction: Relationship Satisfaction..... 115
6	US-Hong Kong Contrast by Avoidance Interaction: Investment Model Scales 116
7	US-Hong Kong Contrast by Independent Self-Construal Interaction: Investment Model Scales 117
8	US-Hong Kong Contrast by Avoidance Interaction: Social Support 118
9	US-Mexico Contrast by Avoidance Interaction: Social Support 119
10	US-Mexico Contrast by Anxiety Interaction: Social Support..... 120
11	US-Hong Kong Contrast by Independent Self-Construal Interaction: Social Support 121
12	US-Hong Kong Contrast by Interdependent Self-Construal Interaction: Depression..... 122
13	Mediation of the Avoidance-Depression Link by Relationship Positivity: Hong Kong 123
14	Mediation of the Avoidance-Depression Link by Relationship Positivity: Mexico..... 124
15	Mediation of the Anxiety-Depression Link by Relationship Positivity: Mexico..... 125

INTRODUCTION AND GENERAL OVERVIEW

Attachment theory (e.g. Bowlby, 1969, 1973, 1980) is an influential theoretical framework for understanding a wide range of interpersonal behavior. The basic premise of attachment theory is that early interactions with caregivers shape one's personality in ways that affect close interpersonal relationships throughout the lifespan. Although first applied from a developmental perspective to understand infants' interactions with caregivers (e.g. Ainsworth, Blehar, Waters, & Wall, 1978), in recent years attachment theory has been widely used by social psychologists to study thought, feelings, and behavior in adult romantic relationships (e.g. Hazan & Shaver, 1987). This research has yielded a large number of studies which detail the effects of attachment styles on perception, feelings, attributions, and behavior-both inside and outside of the context of romantic relationships (for reviews see Feeney, 1999; Mikulincer & Shaver, 2003).

However, nearly all of the research on adult attachment has focused on testing aspects of attachment theory exclusively in Western cultural contexts (see Schmitt et al. 2003, 2004 for notable exceptions). A traditional reading of attachment theory, as articulated by Bowlby (1980), would suggest that the effects of attachment would be universal across cultures. While empirical research on this conjecture remains scant, a number of theorists have suggested that attachment processes might function differently in different cultural contexts (e.g. Rothbaum, Weisz, Pott, Miyake & Morelli, 2000; van Ijzendoorn & Sagi, 1999). Accordingly, a major goal of the present work is to

This dissertation follows the style and format of *Journal of Personality and Social Psychology*.

investigate and compare the influences of adult attachment style on variables related to relationship quality and mental health in three different cultural contexts. Specifically, this project will investigate adult attachment in the US, Hong Kong, and Mexico.

Although attachment theory provides a starting framework for examining differences in romantic relationships across cultures, we believe that self-construal (e.g. Markus & Kitayama, 1991) is an important construct that must be considered in this analysis. Self-construal is briefly defined as the way in which individuals conceive of themselves in relation to other people; a common taxonomy differentiates those who view the self as a unique entity, separate from others (*independent self-construal*) and those who view the self as inherently connected to significant others (*interdependent self-construal*). Self-construal is frequently used to analyze cultural differences, particularly those between Eastern and Western cultures (e.g. Gardner, Gabriel, & Lee, 1999; Markus & Kitayama, 1991). Accordingly, a second major goal of the present work is to use the constructs of independent and interdependent self-construal to complement the theoretical framework provided by attachment theory. Thus, this dissertation seeks to use both attachment theory and self-construal to investigate cultural differences in romantic relationship and mental health variables across cultures.

The layout of the dissertation is as follows. The second section will review the extant literature on adult attachment relevant to the relationship and mental health variables most pertinent for this investigation. The second section will also review the scant and somewhat scattered literature on cultural differences in attachment processes. The third section will review relevant literature on culture and self-construal in reference

to romantic relationships. The fourth section will review literature and present information pertinent for potential cultural differences in the effects of attachment and self-construal. The fifth section will detail the hypotheses for this dissertation. The sixth section describes the experimental methods used in this study. The seventh section details the results, and the eighth section contains the discussions of those results. The conclusion of the dissertation is contained in the ninth and final section.

ATTACHMENT THEORY

According to attachment theory (Bowlby, 1969, 1973, 1980), infant-caretaker interactions are enormously influential in determining one's *attachment style*, a general style of interacting with close others. Infants who have caregivers who provide consistent support and respond to infants' distress signals learn that their needs will be met by close others, and these infants in turn rely on their caregivers for support and comfort, especially when distressed. This pattern of infant-caretaker interaction is thought to lead to the development of a secure attachment style. Infants whose caregivers do not provide support when the child needs it learn not to depend on others for support; these infants tend not to turn to caregivers for support when distressed. This pattern of infant-caregiver interaction is thought to lead to the development of an avoidant attachment style. Infants whose caregivers provide inconsistent support exhibit both approach and avoidance behaviors towards their caregivers when stressed. This pattern of infant-caregiver interaction is thought to lead to the development of an anxious-ambivalent (or anxious) attachment style.

An individual's first interactions with significant others lead to the development of *working models*, which are internal representations of the world and of significant people (including oneself) in one's life (e.g. Collins, 1996; Collins & Allard, 2001). Working models are thought to be the constructs that drive observed differences in thought and behavior of individuals with different attachment styles. Research has shown that, in adulthood, working models influence thinking, perceptions and

attributions in relationships (e.g. Collins, 1996; Hazan & Shaver, 1987), and perceptions of the social world (e.g. Collins & Read, 1990).

Hazan and Shaver (1987) created the first self-report adult attachment measure, which measures the three basic attachment styles (secure, avoidant, and anxious) described above. Though many other measures of adult attachment style have since been proposed (Bartholomew & Horowitz, 1991; Collins & Read, 1990; Simpson, 1990), the current consensus is that adult attachment is best assessed by measuring two underlying constructs (e.g. Brennan, Clark, & Shaver, 1998; Simpson, Rholes, & Phillips, 1996). The first construct, commonly termed avoidance, assesses the extent to which individuals feel comfortable with closeness and intimacy in romantic relationships. People who are high in avoidance desire to keep distance between themselves and their partners (Collins & Feeney, 2000; Fraley & Shaver, 1998), because they expect that their partners will not be available when needed. The second dimension, commonly termed anxiety (or ambivalence), assesses the degree to which individuals are worried that their partners might abandon or reject them. People high in anxiety are very concerned about the availability and responsiveness of attachment figures, particularly in times of stress (Bowlby, 1973). Individuals high in anxiety are very concerned with physical and psychological proximity to romantic partners, and experience distress upon separation from their partners (Brennan et al., 1998; Fraley & Shaver, 1998). Individuals who score low on both the avoidance and anxiety dimensions are described as “secure.” These individuals feel comfortable with intimacy and closeness with their partner and do not

worry about being abandoned or rejected (Bartholomew & Horowitz, 1991; Bowlby, 1988; Mikulincer, 1995).

Attachment and Romantic Relationships

Much research has concentrated on the effects of adult attachment styles on romantic relationships (for a recent review, see Rholes, Paetzhold, & Friedman, in press). The following section provides a brief summary of the previous research investigating the impact of adult attachment styles on the relationship and the mental health variables most relevant for this dissertation.

Relationship Satisfaction

A number of studies have linked insecure attachment with decreased relationship satisfaction. For example, Simpson (1990) found that attachment security was positively associated with relationship satisfaction, while both avoidance and anxiety were negatively associated with relationship satisfaction. Pistole (1989) and Pistole, Clark, and Tubbs (1995) found that secure individuals had greater relationship satisfaction than either avoidant or anxious individuals. Brennan and Shaver (1995) found that both avoidance and anxiety were significantly negatively associated with relationship satisfaction. Kirkpatrick and Davis (1994) found that avoidant men were less satisfied with their relationship than were secure or anxious men; anxious women were less satisfied with their relationship than were secure women. Collins and Read (1990) reported that levels of males' security were positively associated with relationship satisfaction. In a community sample of married couples, Kobak and Hazan (1991) found that insecurely attached individuals were less satisfied with their marital relationships. In

sum, attachment insecurity has been found to be negatively associated with relationship satisfaction.

Relationship Commitment and Investment

Adult attachment styles have been linked to differences in self-reported relationship commitment and investment. Simpson (1990) found that attachment security was positively associated with greater amounts of commitment to romantic partners, while avoidance and anxiety were negatively associated with amount of felt commitment. Pistole et al. (1995) found that secure people evidenced greater relationship commitment than did avoidant or anxious individuals. Kirkpatrick and Davis (1994) found that avoidant men were less committed to their relationship than were secure or anxious men. From a theoretical perspective, one would expect that commitment is a particularly aversive to avoidant individuals, for whom both physical and emotional distance from romantic partners is paramount. One might thus expect that avoidance, more than anxiety, would be most strongly related to reduced relationship commitment.

Social Support

Seeking

A great deal of research has detailed that insecure individuals seek less support from their partners. A number of studies indicate that secure individuals report seeking more social support than their non-secure counterparts (e.g. Berant, Mikulincer, & Florian, 2001; Florian, Mikulincer, & Bucholtz, 1995; Mikulincer, Florian, & Weller, 1993; Priel & Shamai, 1995). Behavioral studies have indicated that attachment

insecurity is related to perceptions of less support, particularly in stressful situations (Collins & Feeney, 2004).

Some research suggests that avoidance, more than anxiety, is associated with reduced levels of support seeking (Mikulincer & Florian, 1995; Ognibene & Collins, 1998). A fair amount of behavioral research is consistent with this notion. For example, Fraley and Shaver (1998) found that avoidant women sought less contact from their partners during separation at an airport. Simpson, Rholes, and Nelligan (1992) showed that, when stressed, avoidant woman retracted both physically and emotionally from their romantic partners, seeking less support and comfort from them. Collins and Feeney (2000) found that more avoidant individuals sought less support from their partners during a stressful situation where caregiving was warranted. In sum, both avoidance and anxiety have been found to be negatively related to support seeking; some research suggests that this effect is more prevalent for avoidance than for anxiety.

Providing

The research on attachment and provision of support has consistently shown that avoidance is strongly negatively related to provision of social support. Simpson et al. (1992) showed that, when their female partners were stressed, more avoidant men provided less support and assurance to their partners. Simpson et al. (1996) found that avoidant men provided less support to their female partners when discussing a large problem in their relationship. Rholes, Simpson, Campbell, and Grich (2001) showed that avoidant husbands provided less support to their wives during the transition to parenthood. Westmaas and Silver (2001) found that more avoidant participants provided

less social support to an experimental confederate supposedly suffering from a serious illness. In sum, attachment avoidance (more so than anxiety) has been found to be negatively related to providing social support to romantic partners.

Depression

In addition to relationship outcomes, this dissertation also examines the impact of attachment and self-construal on a mental health outcome: depression. This variable is included in the present study because it is very relevant to attachment theory. Indeed, attachment theory was first developed in part to address the origins of mental health problems (Bretherton, 1992), and a voluminous literature links poor relationship functioning to depression.

In the social psychological literature, a number of previous studies have investigated the link between attachment and depression. Carnelley, Pietromonaco and Jaffe (1994) found that mildly depressed female college students were more likely to report an insecure attachment style (though this effect was not found in a comparatively older community sample of recovering depressed women). Several studies have found that, in college populations, insecure attachment is associated with increased depressive symptoms (e.g. Priel & Shamai, 1995; Murphy & Bates, 1997; Roberts, Gotlib & Kassel, 1996). This effect has been demonstrated in non-college student populations as well. For example, Cooper, Shaver, and Collins (1998) found that adolescents with insecure adult attachment styles suffered greater levels of depression than their secure counterparts. Mickelson, Kessler, and Shaver (1997) found that, in a nationally representative survey of American adults, insecure attachment was positively associated with depressive

symptoms. Several studies have linked insecure attachment to increased pre and postnatal depression (Bifulco et al., 2004; McMahon, Barnett, Kowalenko, & Tennant, 2005; Simpson, Rholes, Campbell, Tran and Wilson, 2003). In sum, previous research suggests that insecure attachment is associated with increased levels of depressive symptoms.

Culture and Attachment

The literature on culture and attachment is very sparse at the current moment. This is equally true for the research on attachment in infancy and for research on adult attachment. In the only real review of the cross-cultural work on attachment in infants, van Ijzendoorn and Sagi (1999) lay out a case for the universality of the attachment process in infancy. Though the studies reviewed are few (and represent samples from China, Japan, Israel, and Africa), the authors conclude that the attachment process functions in largely the same manner across cultures while acknowledging that cultural context probably plays some role in the attachment process. However, Rothbaum et al. (2000) lay out a strong theoretical case for a cultural reexamination of attachment theory. According to these authors, much of the work on infant attachment is very biased by assumptions made by researchers in Western cultures (for example, the role of infant autonomy as a sign of attachment security) that might not apply in other cultures, such as Japan. The authors call for a new generation of research on attachment that is “specifically attuned to ways in which the attachment process is tied to the cultural context in which it is embedded” (1102).

Relatively few studies have investigated adult attachment in a cultural context. Several papers from the mid 1990's examined cultural and cross-cultural differences in adult attachment. These first investigations, while commendable for their inclusion of research populations different than those traditionally used in social psychological research, used a rather imprecise (though at the time the most current) method of assessing adult attachment. Specifically, the Adult Attachment Questionnaire developed by Hazan & Shaver (1987) lists three short paragraphs, each depicting the secure, avoidant, or anxious style (e.g. *I am somewhat uncomfortable being close to others; I find it difficult to trust them completely, difficult to allow myself to depend on them. I am nervous when anyone gets too close, and often, others want me to be more intimate than I feel comfortable being*, for the avoidant style). The measure is forced-choice, and participants choose the description that is nearest to the way they feel. The following studies employ the AAQ in their investigations of culture and adult attachment. In an examination of ethnic differences in attachment within the US, Doherty and colleagues (Doherty, Hatfield, Thompson, & Choo, 1994) found that there were no differences in the frequency of adult attachment styles among individuals of European-American, Japanese-American, Chinese-American, or Pacific Islander cultural background. The authors concluded that the effects of attachment style had the same impact on romantic relationships for individuals of all ethnicities under study in the US. Another study from the same time period investigated the effects of adult attachment in the US, Japan, and Russia (Sprecher, Aron, Hatfield, Cortese, Potapova, & Levitskaya, 1994), and found that participants in the US were more secure than their foreign counterparts, while

Japanese and Russians were more avoidant than the US participants. Japanese participants were slightly more anxious than participants in either the US or Russia.

The following recent studies have examined cultural differences in adult attachment using a slightly more sophisticated measure, the Bartholomew and Horowitz (1991) measure of adult attachment. This measure lists four short paragraphs, each depicting relationship attitudes. The scale assesses participants' positive vs. negative models of the self and of other people (e.g. *I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me*, assesses the extent to which participants have a positive model of the self and a negative model of others). Participants rate each self and other combination (four items in total) on Likert scales, reporting the extent to which each description is applicable to them. Soon You and Malley-Morrison (2000), in a cross-cultural examination of adult attachment style and adult friendship relationships, found that Koreans scored higher on preoccupied attachment (negative self model and positive other model), and that even after controlling for attachment style, cultural background predicted significant variation in self-reported intimacy and positive expectations about relationships with close friends. This suggests that both attachment style and other aspects of culture can independently predict aspects of adult relationships. Recent papers by Schmitt and colleagues (2003, 2004) suggest cultural differences in attachment processes. In an enormous cross-cultural study (with nearly 18,000 participants) examining attachment differences across 62 cultural regions, Schmitt et al. (2004) conclude that individuals in East Asia

evidenced a more preoccupied attachment style than individuals in other cultural regions. Examining the factor patterns of adult attachment, the authors concluded that, although most cultures evidenced a 2 dimension factor pattern, the same constructs did not always underlie these two patterns in every culture. In addition, the four subscales of their attachment measure did not intercorrelate in the same manner across cultures.

Importantly, Schmitt et al. (2004), while highlighting the breadth and scope of their work, acknowledge that future research should include more broad (e.g. multi-item) measures of adult attachment. Schmitt et al. (2003), in another paper using the same cross-cultural data set, conclude that, across cultures, there is a gender difference in the level of dismissing attachment (positive self model and negative other model), with men being more dismissing than women. However, this difference is small in magnitude and appears idiosyncratic in that it does not occur in every cultural region in their study.

Finally, one very recent study, using yet another measure of attachment (Inventory of Parent and Peer Attachment, Armsden & Greenberg, 1987), investigated differences in attachment between Canadians and Chinese students studying in Canada (DiTommaso, Brannen, & Burgess, 2005). This investigation found no differences between Canadians and Chinese in terms of parental attachment. However, Chinese students reported lower attachment security for romantic and peer domains. In sum, the findings from these previous studies suggest that, when compared to North American populations, Asian populations are more insecurely attached in adulthood.

The vast majority of these previous studies focus on examining differences in mean levels in attachment variables in differing cultural contexts. One important area in

which previous work has not focused has been investigating the relationship between attachment and cultural variables on relationship outcomes (for example, examining whether the *impact* of being avoidant is the same in different cultural contexts). Such investigations are vitally necessary to fully understand the implications of insecure attachment across cultures.

CULTURAL DIFFERENCES:

AN INDIVIDUALISM/COLLECTIVISM AND SELF-CONSTRUAL APPROACH

No social psychological analysis of cultural differences would be complete without discussion of the constructs of individualism and collectivism (e.g. Markus & Kitayama, 1991; Triandis, 1995). Briefly defined, individualist cultures place concerns of the individual above concerns of the group, while collectivist cultures place greater emphasis on group concerns than on concerns of the individual (e.g. Triandis, 1995). Markus and Kitayama (1991) use the psychological construct of self-construal to explain differences between individualist and collectivist cultures at the level of the individual. In this perspective, individuals with an independent self-construal see themselves as independent beings, separate from other people. Individuals with an interdependent self-construal see themselves as inherently connected to close others. The notion that self-construal is one of the psychological constructs responsible for East-West (collectivist/individualist) cultural differences has received considerable empirical support (e.g. Gardner et al., 1999; Lee, Aaker, & Gardner, 2000). The terminology regarding these constructs is not always standard within the social psychological literature. To avoid confusion, in this dissertation, societal levels of these constructs will be referred to as *individualism/collectivism*, while the individual difference constructs will be referred to as *independent/interdependent self-construal*.

The three cultures under study were chosen because they represent a large portion of the spectrum of variation in cultural levels of individualism and collectivism. Hofstede, in his study of cultural individualism in 50 nations (2001), found that the US

was the most individualistic country under study, while Hong Kong was one of the least individualistic, ranking 37. Mexico fell in between the two (ranked 30). In their recent meta-analysis of social psychological research on individualism and collectivism, Oyserman, Coon, & Kemmelmeier (2002) found that the US was more individualistic than Hong Kong, while Mexico fell in between the two other nations. For the analysis of collectivism, Oyserman et al. (2002) found that Hong Kong was more collectivistic than the US. However, Mexico was found to be more collectivistic than either the US or Hong Kong. A number of other research studies support the contention that Hong Kong is more collectivist than the US and other Western cultures (e.g. Chinese Culture Connection, 1987; Ho, 1985; Hong, Morris, Chiu, & Benet-Martinez, 2000; Morrison, Chen, & Salgado, 2004; Kacen & Lee, 2002; Kashima et al., 2005; Triandis, Chen & Chan, 1998; Wheeler, Reis, & Bond, 1989). While the available research for Mexico is much sparser, previous work has suggested that Mexico is more collectivistic than the US (e.g. Diaz-Loving & Draguns, 1999; Shkodriani & Gibbons, 1995)

Early cross-cultural research often compared mean level differences between individuals in Eastern vs. Western cultural contexts, extrapolating that any observed differences were due to resulting cultural differences in individualism/collectivism. However, this method of conducting cultural research has been widely criticized (e.g. Matsumoto, 1999; Oyserman et al., 2002) as insufficient to fully understand cultural differences. The main problem with this sort of research is that one does not measure the critical individual difference variable (in this case, independent/interdependent self-construal) that is thought to underlie the observed cultural differences. Thus, the

researcher has no way to know whether the differences in self-construal are responsible for the obtained results. A more meaningful approach is to measure the critical variable at the level of the individual, and to demonstrate that this variable is causing the cultural differences under study (Matsumoto, 1999; Oyserman et al., 2002; Singelis & Brown, 1995). The present research takes this approach by measuring independent/interdependent self-construal at the level of the individual, and then linking differences in this variable to differences in relationship and mental health outcomes across cultures.

Self-Construal and Romantic Relationships

A variety of work has linked differences in individualism/collectivism (or their self-construal equivalents) to relationship processes. In their analysis of self-construal and gender, Cross and Madson (1997) suggest that the interdependent nature of romantic relationships might be threatening to the self-esteem of individuals with an independent self-construal. They suggest that independent individuals might be especially likely to avoid behaviors that foster intimacy, such as sharing their thoughts with relationship partners. In a similar vein, Dion and Dion (1993; 1996) argue that certain aspects of individualism (such as valuing autonomy) may make it difficult for those high in individualism to achieve intimacy with romantic partners. Bellah, Madsen, Sullivan, Swidler & Tipton (1985) also suggest that individualism is in some ways incompatible with love and commitment.

Some data exist to back these theoretical contentions. In their examination of ethnic differences in attachment within the US, Doherty et al. (1994) found that

independent self-construal was negatively correlated with the amount of passionate love participants reported for a specific other in their life. The negative relationship between independence and passionate love (platonic, friendly love) was marginally significant. Le and Levenson (2005) found that aspects of independent self-construal (an emphasis on the self, with a focus on status differences and competition with others) were positively associated with immature attitudes towards love. Sinclair and Fehr (2004) found that self construal (whether as a naturally occurring individual difference or primed experimentally) was consistently related to beliefs and attitudes about one's current relationship. Specifically, independent self-construal was positively related to increased likelihood of responding to relationship problems by actively expressing dissatisfaction, while interdependent self-construal was positively related to increased likelihood of passively waiting for relationship problems to improve. In a related vein, Kim and Kitani (1998) found independent self-construal to be positively related to a dominating style of conflict management, and negatively related to an obliging and avoiding conflict style among Hawaiian students. Conversely, interdependent self-construal was negatively related to a dominating relationship conflict management style, and positively related to obliging, avoiding, and compromising conflict styles in romantic relationships. Dion and Dion (1991) found independent self-construal to be negatively related to love felt for one's romantic partner. In their sample of Canadian students, Dion and Dion (1991) also found that independence was negatively related to self-reported levels of caring, need, and trust for one's partner and negatively related to the amount of physical attraction for one's partner. This investigation also showed that,

when characterizing experiential aspects of love, more independent participants were less likely to rate their love experiences as tender, deep, or rewarding. Dion and Dion (1994; as reported in Dion & Dion, 1996) also found that independent self-construal was related to a less positive attitude towards marriage, while interdependent self-construal was related to a less favorable attitude towards divorce. Finally, among European-American students, self-reported independence was found to be negatively associated with relationship commitment (Agnew & Lee, 1997; Kimmelmeier, Sanchez-Burks, Cytron, & Coon, 1998, as reported in Oyserman et al., 2002). The evidence thus suggests that self construal has a reliable effect on relationship variables. The strongest pattern from the available data suggests a negative effect of independent self-construal on relationship outcomes. While much less evidence links interdependent self-construal with relationship outcomes, one might expect that, to the extent that increased interdependence helps fulfill basic psychological needs of belongingness and closeness (cf. Baumeister & Leary, 1995; Leary & Baumeister, 2000), one might expect interdependent self-construal to be associated with positive relationship outcomes.

CULTURAL DIFFERENCES IN THE IMPACT OF ATTACHMENT AND SELF-CONSTRUAL

The Role of Cultural Fit

The question of whether the links between attachment and self-construal variables and the relationship and mental health variables will be similar in all cultural contexts is an open one. The theorizing presented earlier does not explicitly suggest that any of the processes linking insecure attachment and self-construal to relationship outcomes would differ according to culture. However, from our perspective, a very important issue to consider is that of cultural fit: the concordance of one's personal characteristics with societal norms and imperatives. In this section, I present suggestive evidence from two other research areas in psychology which point to the role that cultural fit could play in the current investigation.

The first line of research comes from industrial/organizational psychology. Within this discipline, a large body of research has accumulated detailing the consequences of workers' fit with the culture of their workplace (e.g. O'Reilly, Chatman, & Caldwell, 1991). Kristof (1996) defines this research domain, broadly termed person-environment or person-organization fit, as concerned with "the antecedents and consequences of compatibility between people and the organizations in which they work" (pp. 49). Fit between a person and their environment is measured in a number of different ways. The *perceived fit* approach consists of directly asking individuals to rate the extent to which their characteristics or values match those of their organization. The *subjective fit* approach consists of asking individuals about their own characteristics or

values, and those of their organization. Fit is operationalized as the difference between these two measures (e.g. O'Reilly et al., 1991). The *objective fit* approach consists of asking individuals about their own characteristics or values, and then soliciting data from other sources (e.g. coworkers or supervisors) to comprise an estimation of the work environment on the relevant characteristics or values. Fit is operationalized as the difference between the individual's self-ratings and those representing the environment.

A recent meta-analysis of 172 studies on person-environment fit analyzed the consequences of individuals' fit within a work setting in four different domains of fit: person-job, person-organization, person-group, and person-supervisor (Kristof-Brown, Zimmerman, & Johnson, 2005). The findings, collapsed across definitions of fit, are quite consistent. Person-job fit was found to be strongly positively related to job satisfaction ($r = .56$), organizational commitment ($r = .47$), and negatively related to intentions to quit ($r = -.46$). Person-organization fit was found to be strongly related to job satisfaction ($r = .44$) and organizational commitment ($r = .51$) and moderately negatively related to intentions to quit ($r = -.35$). Person-group fit was moderately related to job satisfaction ($r = .31$), organizational commitment ($r = .19$), and negatively related to intentions to quit ($r = -.22$). Finally, person-supervisor fit was strongly related to job satisfaction ($r = .44$), while weakly related to organizational commitment ($r = .09$). In sum, the work in organizational psychology on person-environment fit suggests that increased levels of fit between a person and his work environment are strongly related to increased feelings of psychological well-being (job satisfaction) and more positive perceptions of one's environment (increased organizational commitment, decreased

intentions to quit). This relationship appears robust, appearing across a wide variety of conceptualizations of one's environment (e.g. job, organization, group, or supervisor) and of the type of fit measured (perceived, subjective, or objective).

The second approach that sheds light on the issue of person-culture fit comes from work on acculturation, detailing sojourners' interactions with a host culture. A wide variety of empirical research has shown that lack of fit between a sojourner and his host culture is associated with negative psychological outcomes. Ward and Chang (1997) found that, for American sojourners in Singapore, the discrepancy between individual levels of extraversion and societal norms for this variable was positively related to depression. In other words, the less one fit with societal levels of extraversion for the host culture, the more depressive symptoms one had. Other research by Ward and colleagues has shown that, for foreigners residing in New Zealand, cultural distance (the subjective difference between one's home culture and that of a host culture) is positively associated with difficulties in psychological adjustment (for example, increased tension, depression, and anger, Ward & Searle, 1991). These researchers also found cultural distance to be related to difficulties in sociocultural adjustment (less skill in navigating everyday life in the host culture and poorer adjustment to novel aspects of the host culture, Searle & Ward, 1990). Joiner (2001), in a study of Greek manufacturing firms, found that when organizational culture was incompatible with national culture, employees experienced greater job stress.

Some research has examined the impact of cultural fit in regards to self-construal. The general finding emerging from this literature is that positive outcomes are associated

with matching the cultural norm for self-construal, while negative outcomes are associated with mismatching the cultural norm for self-construal. For example, Chirkov, Lynch, and Niwa (2005) found that, for international students studying in Canada, lack of perceived cultural fit on a measure of interdependence (comparing one's own hypothetical behavior with that of a typical Canadian) was negatively associated with life satisfaction, positively associated with physical health problems, and marginally positively associated with depression. Furthermore, even for Canadian students, perceived lack of cultural fit on the measures of self-construal was negatively related to positive well-being. Investigating corporate culture within the context of societal culture, Parkes, Bochner, and Schneider (2001) explored the impact of the fit between self-construal at the level of the individual, and the cultural context of the workplace (Australia or East Asia). These researchers found interactions between interdependent self-construal and cultural context, such that interdependent individuals were more committed to their jobs in general, but this effect was much stronger in Asian (when individual and societal characteristics matched) than Australian organizations. A similar interdependence by cultural context interaction revealed that interdependent individuals had longer tenure in Asian organizations, but not in Australian organizations. Oguri and Gudykunst (2002) found that, among Asian visitors to the US, higher independent self-construal (matching cultural norms for this variable) was associated with greater psychological adjustment to life in the United States. Cross (1995) found that, for Asian graduate students beginning their studies in the US, increased levels of independent self-construal (matching US norms) were associated with the use of direct coping strategies

to deal with stress. Higher levels of interdependent self construal (mismatching US norms) were associated with greater perceived stress among Asian graduate students. The negative effects of cultural mismatch of self-construals have even been demonstrated within American populations in the United States. For example, Matsumoto et al. (1999) found that self-perceived discrepancies among individual and societal self-construal (for US college students) was associated with greater use of coping strategies. Greater use of coping strategies, in turn, was related to increased levels of anxiety and depression. The authors suggest that discrepancies between individual and societal self-construal create tension and stress that requires individuals to cope. The broad conclusion from the research on person-environment fit and from the research on cultural fit is that those individuals whose personal characteristics match those of their culture and surroundings have better psychological functioning (e.g. higher job satisfaction, less depression, less stress). Individuals whose personal characteristics do not match those of their culture or surroundings, however, evidence worse psychological functioning.

Avoidance, Anxiety, Independence and Interdependence: Cultural Matches and Mismatches

How might individual traits of avoidance and anxiety be compatible or incompatible with the norms of collectivistic and individualistic cultures? An answer to this question requires a detailed look at the defining characteristics of collectivistic versus individualistic societies. Triandis, in his 1995 book on individualism and collectivism, lays out the following four dimensions of these constructs: 1. The

definition of the self is independent in individualism; the definition of the self is interdependent in collectivism, 2. Personal and communal goals are not at all aligned in individualism; personal goals are closely aligned with communal goals in collectivism, 3. Cognitions that focus on attitudes/personal needs/rights/contracts guide social behaviors in individualistic cultures; cognitions that focus on norms/obligations/duties guide social behaviors in collectivist cultures, 4. Rational analyses of the advantages and disadvantages of maintaining relationships are emphasized in individualistic cultures. Social relationships are emphasized, even when they are disadvantageous, in collectivistic cultures.

Viewed from this perspective, avoidance can be thought to mismatch in some ways the cultural imperatives of collectivistic societies. One of the prime concerns of avoidant individuals is maintaining physical and psychological distance from their relationship partners (e.g. Collins & Feeney, 2000; Fraley & Shaver, 1998). Furthermore, avoidant individuals tend to have low levels of interdependence with their relationship partners (e.g. Levy & Davis, 1988). Finally, avoidant individuals greatly value independence and autonomy in relationships (e.g. Mikulincer & Nachshon, 1991). All of these avoidant characteristics- the desire for distance, lack of interdependence, and valuing autonomy- can be seen to be in conflict with the cultural imperative of the self as interdependent (construct 1) and the cultural emphasis on relationships (construct 4) that are found in collectivistic societies. This line of reasoning suggests that the negative effects of avoidance might be particularly strong in collectivistic societies (Hong Kong, and to a lesser extent, Mexico), because not only do avoidant tendencies serve to keep

distance between an individual and his/her romantic partner, aspects of the avoidant person's character are at odds with the prevailing collectivistic cultural norms.

A similar argument can be advanced regarding the impact of independent self-construal in collectivistic societies. The independent view of the self perceives the individual as a bounded and unique entity, separate and distinct from other people. The idea that one is an individual whose behavior is given meaning primarily by reference to one's internal thoughts, feelings, and actions is paramount in the independent depiction of the self (Markus & Kitayama, 1991). However, in collectivistic societies, interdependent self-construal is the norm (Markus & Kitayama, 1991; Triandis, 1995). The independent view of the self seems contrary to the cultural imperatives of collectivism- particularly the idea that the interdependent self is the norm (construct 1), and the idea that norms, obligations, and duties guide social behavior (construct 3). Thus, the negative impact of independent self-construal on relationship outcomes (e.g. Dion & Dion, 1991) should be especially strong in collectivistic societies (Hong Kong, and to a lesser extent, Mexico), because not only do independent tendencies serve to prevent closeness between relationship partners (e.g. by acting as a barrier to intimacy), aspects of the independent individual's character are at odds with the prevailing collectivistic cultural norms.

Effects of matching or mismatching of interdependent self-construal are harder to predict. On the one hand, the cultural mismatching hypothesis suggests that the effects of collectivism in an individualistic society (the US) would be negative. On the other hand, unlike individualism and avoidance, both of which have documented negative effects on

relationship outcomes, no research has indicated that interdependent self-construal has negative effects on relationship outcomes. The little research that does exist suggests somewhat positive effects of interdependent self-construal on relationship outcomes. Furthermore, previous research on interdependent self construal (in non romantic domains) suggests that an interdependent orientation produces thoughts and behaviors that would be conducive to relationship harmony and satisfaction. For example, priming interdependent self construal leads to increased desire for interpersonal closeness (Holland, Roeder, van Baaren, Brandt, & Hannover, 2004), and increased unconscious mimicry of others (van Baaren, Maddux, Chartrand, Bouter, & van Knippenberg, 2003). It is fairly self-explanatory that interpersonal closeness might lead to desirable outcomes for romantic relationships. Given that mimicry has been shown to increase smoothness of interpersonal interactions and increase liking for the one who mimics (Chartrand & Bargh, 1999), and to increase helpfulness and generosity of the one who is mimicked (van Baaren, Holland, Kawakami, & van Knippenberg, 2004), one has additional reason to believe that interdependent self-construal might be associated with positive outcomes in romantic relationships. Thus, on the one hand, cultural mismatching of interdependent self-construal might lead to negative relationship outcomes. On the other hand, interdependent self-construal might be associated with positive relationship outcomes; there is no *a priori* reason to think that these positive outcomes would be restricted to a single cultural context.

Effects of matching or mismatching in terms of anxiety are also hard to predict. One might expect that the anxious tendency to desire closeness with significant others

would be matched with the cultural norms in collectivistic societies, and mismatched with cultural norms in individualistic societies. However, a closer examination of the tendencies of anxious attachment and collectivistic/individualistic norms reveals some key differences in these constructs. Anxiety is characterized by worries about proximity and separation; fear of abandonment is central to anxious individuals (e.g. Bowlby, 1973). Anxious individuals seem to demand excessive amounts of physical and/or emotional closeness with their relationship partners (e.g. Fraley & Shaver, 1998; Hazan & Shaver, 1987). Anxious attachment, in sum, is characterized by a clingy, at times desperate need for physical and psychological fusion with one's romantic partner. While anxiety encompasses a need for interdependence with one's romantic partner, this type of interdependence is quite different than that described by interdependent self-construal. Markus and Kitayama (1991) describe the notion of interdependence as focusing on the "fundamental connectedness of human beings to each other" (pp. 227), and that the cultural norm of interdependent societies is to maintain this interdependence among individuals. The authors further state that "experiencing interdependence entails seeing oneself as part of an encompassing social relationship and recognizing that one's behavior is determined, contingent on, and, to a large extent organized by what the actor perceives to be the thoughts, feelings, and actions of *others* in the relationship" (pp. 227). In the interdependent perspective, the self is given meaning and is most complete when it is seen in terms of the appropriate social relationship. It is clear that this type of interdependence, focusing on connectedness between the self and others, is quite different from the anxious desire for intense physical and psychological closeness with

one's relationship partner. Thus, it is unlikely that anxious attachment "matches" with the interdependent nature of collectivistic societies. Furthermore, it is unclear whether the characteristics of anxiety are any more "mismatched" with the independent nature of individualistic societies than they are with the interdependent nature of collectivistic societies. Indeed, the extreme desire for fusion with one's partner should be equally unpleasant in all cultures; such desire is by its very character excessive. In sum, based on an examination of the constructs of anxiety, interdependence, and independence, it becomes clear that anxiety is not matched (or mismatched) with the norms of either collectivistic or individualistic societies. One would therefore have no *a priori* reason to expect that the negative effects of anxiety on relationship outcomes would be consistently stronger or weaker in any given culture.

HYPOTHESES

Hypothesis 1: Mean Level Difference of Attachment and Self-Construal

Based upon the previous work that suggests more attachment insecurity in Eastern cultural contexts, I hypothesize that participants in Hong Kong will manifest higher levels of attachment anxiety and avoidance than participants in the US. Due to the lack of previous work on adult attachment in Mexico, no precise hypotheses can be maintained about the general level of attachment insecurity in this cultural context.

Although previous theorizing has continually posited that Asian cultures are more interdependent than Western cultures (and vice versa) (e.g. Markus & Kitayama, 1991; Triandis, 1995), examination of mean levels of individual difference responses of these constructs have not always supported this conclusion (Matsumoto, 1999; Oyserman et al., 2002; Heine, Lehman, Peng & Greenholtz, 2002). The most pragmatic approach to this issue (and the one taken in this dissertation) is to examine the *impact* of self-construal in different cultures. Accordingly, no specific hypotheses regarding the mean level differences in self-construal are made for the current project.

Hypothesis 2: Relative Universality of Effects of Adult Attachment

Based upon the previous theoretical and empirical work pointing to somewhat universal nature of the attachment process, the effects of attachment style on relationship and mental health variables should be roughly similar in all cultures under study. In other words, although cultural variation is expected, main effects of attachment should be present (e.g. attachment avoidance should be negatively related to relationship

satisfaction in all three cultures). Such main effects would indicate that attachment is associated with the same general outcomes in all three cultures under investigation.

Hypothesis 3: Effects of Self-Construal on Relationship and Mental Health

Outcomes

Based upon the previous research on individualism/collectivism and independent/interdependent self-construal, these variables should be found to impact the relationship and mental health variables under study. Specifically, independent self-construal should be negatively related to relationship outcomes and mental health variables. Though less previous research has addressed this contention, based on the aforementioned reasoning, interdependent self-construal could be associated with positive relationship outcomes and reduced levels of depression.

Hypothesis 4: Differential Effects of Avoidance on Relationship and Mental Health

Outcomes According to Cultural Context

The question of whether the relationships between avoidant and anxious attachment and relationship and mental health variables will be the same or different in the 3 cultures under study is an interesting one. As explained earlier, from an individualism/collectivism point of view one might expect that being avoidant in a collectivistic culture would be especially detrimental to relationship outcomes, because one is breaking both cultural imperatives and relational ones. It is thus possible that, in more collectivistic societies, the effects of attachment avoidance would be particularly strong. Given that Hong Kong is thought to be a more collectivistic society than Mexico, one might expect these effects to be more frequent in the former culture than in the latter.

Hypothesis 5: Differential Effects of Self-Construal on Relationship and Mental Health Outcomes According to Cultural Context

In a similar analysis to the one described above, it is possible that the effects of independent self-construal might differ in strength depending on the cultural context. From an individualism/collectivism point of view, being independent in a collectivistic culture could have particularly negative consequences for relationship outcomes. Being interdependent in an individualistic culture might similarly have negative consequences for relationship outcomes. However, there is reason to doubt this latter conjecture. The hypothesized effects of interdependence are positive in nature; there is no a priori reason to expect this variable to be related to negative outcomes anywhere. Indeed, if increased social connection to others helps meet psychological needs (e.g. Baumeister & Leary, 1995), one might expect that the relationship between interdependent self-construal and relationship outcomes is positive in all cultures under study.

In order to evaluate these hypotheses, a large survey study was conducted. Data were collected at Texas A&M University, US, the Chinese University in Hong Kong, PRC, and the National Autonomous University of Mexico in Mexico City. The methods for this study are described in the following section.

METHOD

Participants

Participants in all cultures were university students. All participants in the US and Mexico participated in partial fulfillment of a course requirement. Many participants in Hong Kong also participated in partial fulfillment of a course requirement, though some received \$50 HK (around \$2.50 USD) for their participation.

An effort was made to recruit at least 150 (with a maximum of 200) people per culture, with the one restraint being that an approximately equal number of men and women be sampled from each culture. All participants were currently involved in a relationship of at least 3 months' duration. The US sample included 214 participants (99 male, 112 female, 3 did not specify gender), with an average age of 19.03 years ($SD = 1.23$), and an average relationship length of 17.22 months ($SD = 12.26$). The Hong Kong sample included 153 participants (71 male, 82 female), with an average age of 20.44 years ($SD = 1.90$) and an average relationship length of 23.47 months ($SD = 21.34$). The Mexican sample included 200 participants (96 male, 104 female), with an average age of 23.34 years ($SD = 3.49$) and an average relationship length of 28.70 months ($SD = 29.49$).

Materials

All participants completed the following questionnaires in the same order. The questionnaires were translated from English into Chinese and Spanish using back-translation techniques (Brislin, 1970). The back-translation technique consists of first translating the questionnaires from English into the target language. A second person

(who has not seen the original versions of the questionnaires) then translates the measures from the target language back into English. The two English versions are checked against one another, and revisions (where necessary) are made to the target language version.

The Chinese version of the current measures was back-translated by scholars at the Chinese University of Hong Kong. The Spanish version was back-translated twice—once by native Mexican students studying at Texas A&M, and once by scholars at National Autonomous University of Mexico. The two translations were then cross-checked to create the final Spanish translation. The final questionnaire battery contained a great deal of measures; the results in this dissertation concern only a subsection of the resulting data. The questionnaires used in this dissertation are outlined below, presented in order of administration. All the measures relevant for this report (including the Spanish and Chinese translations) are included in the appendices.

Investment in the current relationship was measured by the Investment Model Scale (Rusbult, 1980). This scale measures four different facets of commitment: commitment, satisfaction, alternatives, and investments. Items were answered on 9 point scales. Due to experimenter error, the last item of the investment subscale was not given to the Mexican sample. Proportional scores (total sum of items divided by the number of items completed for each culture) were created to compensate for this omission. Cronbach's alphas for the investment scale in Hong Kong, the US, and Mexico were .84, .84, and .81, respectively.

Relationship satisfaction was measured by Hendrick's Relationship Satisfaction Scale (Hendrick, 1988). Sample items include "How good is your relationship, compared to most" and "How many problems are there in your relationship" (reverse scored). In the US and Hong Kong, items were answered on 7 point scales, from 1 (*not at all/poorly*) to 7 (*a great deal/extremely well*). Due to an experimenter error, this scale was answered on an 8 point scale in Mexico, from 1 (*not at all/poorly*) to 8 (*a great deal/extremely well*). To correct for this problem, each item was transformed in a proportion such that scores per item could range from 0 to 1. All items were then summed to create a scale score for each participant. Cronbach's alpha was .90 in Hong Kong, .83 in the US, and .81 in Mexico.

Brennan, Clark, and Shaver's (1998) measure of adult attachment was used to measure attachment style. This 36-item measure has two subscales, each consisting of 18 items. Responses were made on 7 point Likert scales from 1 (*disagree strongly*) to 7 (*agree strongly*). One subscale measures avoidance and one subscale measures anxiety. Participants responded to this measure according to how they thought and felt about romantic partners in general. Sample items from the avoidance subscale include "I prefer not to show partners how I feel deep down" and "I find it relatively easy to get close to partners" (reverse scored). Sample items for the anxiety subscale include "I worry a fair amount about losing partners" and "My desire to be very close sometimes scares people away." In Hong Kong, alpha's for the avoidance and anxiety subscales were .90 and .88 respectively. In the US, alpha's for the avoidance and anxiety subscales were .92 and .92,

respectively. In Mexico, alpha's for the avoidance and anxiety subscales were .79 and .88, respectively.

Amount of perceived social support received from partner was measured by Sarason, Levine, Basham, and Sarason's (1983) Social Support Questionnaire. This 7 item measure was responded to on 7 point Likert type scales from 1 (*not at all*) to 7 (*very much*). A sample item is "How much can you count on your partner to distract you from your worries when you feel under stress?" Cronbach's alpha for Hong Kong, the US, and Mexico were .90, .87, and .74, respectively.

Depression was measured by the Center for Epidemiologic Studies Depression Scale (see Radloff & Teri, 1986). Participants indicated how often they felt a certain way during the past week. Items were answered on 4 point Likert scales from 1 (less than 1 day) to 4 (5-7 days). Sample items include "I felt hopeful about the future" (reverse scored) and "I thought my life had been a failure." Alphas for Hong Kong, the US, and Mexico were .91, .88, and .91, respectively.

Independent and interdependent self-construal were measured by Triandis and Gelfand's (1998) individualism-collectivism questionnaire. This 16 item scale has two 8 item subscales, one of which measures independence, the other of which measures interdependence. Items were answered on a 5 point Likert scale, from 1 (strongly disagree) to 5 (strongly agree). A sample item for the independence subscale is "My personal identity, independent of others, is very important to me." A sample item for the interdependence subscale is "It is important to me that I respect the decisions made by my groups." Alpha's for the independence subscale in Hong Kong, the US, and Mexico

were .61, .70, and .71, respectively. Alpha's for the interdependence subscale in Hong Kong, the US, and Mexico were .64, .71, and .73, respectively.

RESULTS

Preliminary Analyses

Factor Analysis of the Experiences in Close Relationships Scale

The 36 items in the ECR attachment scale were first submitted to a factor analysis within each culture. A maximum likelihood extraction with a varimax rotation was used (with the stipulation that the analyses retain 2 factors); exploratory factor analysis was chosen because the sample size for each culture was too small to allow for confirmatory factor analysis.

In the US, all of the items loaded correctly on the appropriate factor. The avoidance and anxiety factors accounted for 20.52 and 20.57 percent of total variance, respectively; 41.09 percent of the total variance in the ECR items was thus accounted for by these two factors in the US. In Hong Kong, all but 3 of the items loaded on the appropriate factor; these three items loaded equally on both factors. The avoidance and anxiety factors accounted for 19.12 and 15.49 percent of the total variance, respectively (for a cumulative total of 34.61%) in Hong Kong. In Mexico, all but 6 of the items loaded on the appropriate factor; one item loaded equally on both factors, and the others loaded highly negatively on the anxiety factor. These items were all avoidance items. The avoidance and anxiety factors accounted for 11.42 and 18.67 percent of the total variance, respectively (for a cumulative total of 30.09%) in Mexico. The factor loadings for the ECR items are displayed in Table 1.

Factor Analysis of the Individualism/Collectivism Scale

The 24 items in the Individualism Collectivism scale were submitted to a factor analysis within each culture. A maximum likelihood extraction with a varimax rotation was used (with the stipulation that the analyses retain 2 factors). In the US, all items loaded more highly on the appropriate factor. However, four of the factor loadings on the independent self-construal subscale were below the level of .30. For the interdependent subscale, all of the items loaded on the appropriate factor with loadings of greater than .30. The independent and interdependent factors accounted for 12.74 and 13.12 percent of the total variance, respectively (for a cumulative total of 25.86%) in the US. In Hong Kong, six of the eight independent self construal items loaded more highly on the appropriate factor (two factor loadings were below .30), and six of the eight interdependent self-construal items loaded more highly on the appropriate factor (two factor loadings were below .30). The independent and interdependent factors accounted for 12.71 and 12.69 percent of the total variance, respectively (for a cumulative total of 25.40%) in Hong Kong. In Mexico, five of the 8 independent self-construal items loaded on the appropriate factor (all correct loadings above .30), and all of the eight interdependent self-construal items loaded on the appropriate factor (all loadings above .30). The independent and interdependent factors accounted for 13.96 and 16.52 percent of the total variance, respectively (for a cumulative total of 30.48%) in Mexico. The factor loadings for the Individualism/Collectivism Scale items are displayed in Table 2.

Factor Analysis of the Relationship Satisfaction Scale

The 7 items in the Relationship Satisfaction scale were submitted to a factor analysis within each culture. A maximum likelihood extraction was used (with the stipulation that the analyses retain one factor). In the US, all items loaded on the one factor; all factor loadings were greater than .30. The factor accounted for 46.24 percent of the variance. In Hong Kong, all items loaded on the one factor; all factor loadings were greater than .30. The factor accounted for 59.84 percent of the variance. In Mexico, all items loaded on the one factor; all factor loadings were greater than .30. The factor accounted for 46.24 percent of the variance. The factor loadings for Relationship Satisfaction Scale items are displayed in Table 3.

Factor Analysis of the Investment Model Scale

The 17 items in the Investment Model Scale were submitted to a factor analysis within each culture. Though the scale was originally designed to comprise four separate subscales, in the present study, the four subscales were summed together to create an overall index of commitment and investment. Accordingly, the present analyses used a maximum likelihood extraction with the stipulation that the analyses retain one factor to measure commitment and investment to one's relationship. In the US, all the items loaded on the one factor; three factor loadings, however, were less than .30. The factor accounted for 31.80 percent of the variance. In Hong Kong, all but two of the items loaded on the one factor; two of the factor loadings, however, were less than .30. The factor accounted for 33.78 percent of the variance. In Mexico, all but three of the items loaded on the factor; two of the factor loadings, however, were less than .30. The factor

accounted for 28.94 percent of the variance. The factor loadings for Investment Model Scale items are displayed in Table 4.

Factor Analysis of the Social Support Scale

The 7 items in the Social Support Scale were submitted to a factor analysis within each culture. A maximum likelihood extraction was used (with the stipulation that the analyses retain one factor). In the US, all items loaded highly on the one factor; all factor loadings were greater than .30. The factor accounted for 51.02 percent of the variance. In Hong Kong, all items loaded on the one factor; all factor loadings were greater than .30. The factor accounted for 59.84 percent of the variance. In Mexico, all items loaded on the one factor; all factor loadings were greater than .30. The factor accounted for 44.84 percent of the variance. The factor loadings for Social Support Scale items are displayed in Table 5.

Factor Analysis of the CESD Depression Scale

The 20 items in the CESD depression scale were submitted to a factor analysis within each culture. A maximum likelihood extraction was used (with the stipulation that the analyses retain one factor). In the US, all items loaded on the one factor; all but one factor loadings were greater than .30. The factor accounted for 30.88 percent of the variance. In Hong Kong, all items loaded on the one factor; all but one factor loadings were greater than .30. The factor accounted for 36.12 percent of the variance. In Mexico, all items loaded on the one factor; all factor loadings were greater than .30. The factor accounted for 35.08 percent of the variance. The factor loadings for the CESD depression scale items are displayed in Table 6.

Since the sample sizes for each culture are rather small for factor analysis of the above, we are disinclined to draw conclusions about the items that did not load as expected in the US, Hong Kong and Mexico samples. On the whole, the exploratory factor analyses reveal that the scales performed reasonably well in the three cultures under study.

Correlations Between Avoidance and Anxiety

The correlation between avoidance and anxiety was positive in the US ($r = .14$) and Hong Kong ($r = .12$), but negative in Mexico ($r = -.15$). No within culture gender differences in the magnitude of this correlation were found. Fischer's r to z transformations showed that the relationship between these two variables was significantly different between Mexico and the US, $z = 2.65$, $p < .05$ and Mexico and Hong Kong, $z = 2.45$, $p < .05$. There was no difference between the strength of this correlation between the US and Hong Kong, $z = .18$, ns.

Means and Standard Deviations

The means and standard deviations in each culture for all of the variables under study are presented in Table 7.

Mean Level Differences in Attachment and Self-Constraint

The primary analyses in this dissertation, presented below, investigate the impact of attachment insecurity and self-construal on relationship and mental health variables. However, preliminary analyses were first conducted to examine mean level differences in attachment avoidance and anxiety, and independent and interdependent self-construal. The main hypothesis relevant to these analyses regards the levels of attachment

avoidance and anxiety in Hong Kong compared to levels of these variables in the US; based on the previous research presented earlier, attachment insecurity was hypothesized to be greater in Hong Kong than in the US. No specific predictions were made regarding the levels of self-construal in the cultures under study.

These analyses were conducted using two dummy coded contrast variables to compare differences in mean levels in the US vs. Hong Kong, and the US vs. Mexico, respectively (Cohen, Cohen, Aiken & West, 2003). Both contrast variables were entered simultaneously into a linear regression analysis¹.

The first analysis investigated levels of attachment avoidance, and revealed a significant effect of both the US-Hong Kong contrast, $\beta = .14, t = 2.97, p < .01$, and the US-Mexico contrast, $\beta = .24, t = 4.98, p < .001$. This indicates that attachment avoidance was higher in Hong Kong than in the US, and that attachment avoidance was higher in the Mexico than in the US.

The second analysis investigated levels of attachment anxiety, and revealed a significant effect of the US-Hong Kong contrast, $\beta = .17, t = 3.53, p < .001$. This indicates that attachment anxiety was higher in Hong Kong than in the US. The US-Mexico contrast was not statistically significant, $\beta = .06, t = 1.27, p = .21$, indicating that levels of anxiety were not significantly different between these two cultures.

The third analysis investigated levels of independent self construal, and indicated a significant effect of the US-Mexico contrast, $\beta = .12, t = 2.61, p < .01$, indicating that levels of independence were higher in Mexico than in the US. The US-Hong Kong

contrast was not significant, $\beta = .08$, $t = 1.60$, $p = .11$, indicating that levels of independent self-construal were not significantly different in the US and Hong Kong.

The fourth analysis investigated levels of interdependent self-construal, and indicated significant effects of both the US-Hong Kong contrast, $\beta = -.24$, $t = 5.12$, $p < .001$, and the US-Mexico contrast, $\beta = -.12$, $t = 2.62$, $p < .01$. This indicates that interdependent self-construal was higher in the US than in Hong Kong, and that interdependence was higher in the US than in Mexico.

Primary Analyses

Two regression analyses were conducted for each dependent variable- one analysis served to investigate whether the effects of avoidance were similar or different between the US and Hong Kong and Mexico (respectively), while the other served to investigate whether the effects of anxiety were similar or different between US and the two other cultures (Cohen et al., 2003). In the first steps of all analyses, the following control variables were entered: age, relationship length (in months), and participant gender.² Predictor variables entered in the first step were the avoidance and anxiety variables (centered within each culture as recommended by van de Vijver and Leung (1997)), the independent and interdependent self-construal variables (centered within cultures), and the two dummy coded variables representing the US-Hong Kong and US-Mexico culture contrasts, respectively.

For the analyses testing the effects of avoidance, the following two-way interactions were examined: both culture contrasts by avoidance, both culture contrasts by independence, both culture contrasts by interdependence, and the avoidance by

independence and avoidance by interdependence interactions. For the analyses testing the effects of anxiety, the following two-way interactions were examined: both culture contrasts by anxiety, both culture contrasts by independence, both culture contrasts by interdependence, and the anxiety by independence and anxiety by interdependence interactions. As no specific hypotheses or predictions were made involving three-way interactions, no three-way interaction terms were included in the regression models.

According to the guidelines set out by Aiken and West (1991), the main effects were interpreted only in the regression step that contained the main effects (and no interactions). The two way interactions were interpreted only in the step that included all of the two way interactions³.

The primary results from these analyses are reported below, by dependent variable (see Tables 8-11 for a complete list of regression coefficients from these analyses).

Relationship Satisfaction

The regression analyses investigating relationship satisfaction revealed several main effects. Avoidance ($\beta = -.35, t = 8.88, p < .001$) and anxiety ($\beta = -.27, t = 7.00, p < .001$) were both strongly negatively related to relationship satisfaction. A significant effect of interdependent self-construal, $\beta = .12, t = 3.01, p < .01$, revealed that increased interdependent tendencies were associated with increased satisfaction with one's relationship. Main effects of both the US-Hong Kong contrast ($\beta = -.38, t = 8.83, p < .001$) and the US-Mexico contrast ($\beta = -.16, t = 3.19, p < .01$) revealed that

relationship satisfaction was higher in the US than in Hong Kong and Mexico, respectively.

A US-Hong Kong contrast by avoidance interaction ($\beta = -.24, t = 4.89, p < .001$) revealed that, while the relationship between avoidance and relationship satisfaction was negative in both cultures, this relationship was much stronger in Hong Kong than in the US (Figure 1). A US-Mexico contrast by avoidance interaction ($\beta = -.10, t = 2.10, p < .05$) revealed that the negative relationship between avoidance and relationship satisfaction was much stronger in Mexico than in the US (Figure 2). These results provide support for the hypothesis that being avoidant in collectivistic societies (mismatching cultural norms) is associated with more negative relationship outcomes.

A US-Hong Kong contrast by anxiety interaction ($\beta = -.10, t = 2.25, p < .05$) revealed that, while attachment anxiety was negatively related to relationship satisfaction in both the US and Hong Kong, the strength of this negative relationship was much stronger in Hong Kong than in the US (see Figure 3). A US-Mexico contrast by anxiety interaction ($\beta = -.17, t = 3.58, p < .01$) revealed that the negative effects of attachment anxiety on relationship satisfaction were much stronger in Mexico than in the US (Figure 4). Though these effects were not predicted specifically, the data reveal that the negative effects of anxiety on relationship satisfaction are stronger in collectivistic societies.

A US-Hong Kong contrast by independent self-construal interaction ($\beta = -.14, t = 3.02, p < .01$) revealed that, while there was almost no relationship between independence and relationship satisfaction in the US, there was a strong negative relationship between these variables in Hong Kong (Figure 5). The more independent

one was in Hong Kong, the less satisfied one was with one's romantic relationship. This also supports the contention that the negative effects of independent self-construal on relationship outcomes are stronger in more collectivistic societies.

Investment Model Scales

The analyses of the investment model scales revealed the following main effects. Relationship length was positively related to investment in one's relationship, $\beta = .10$, $t = 2.08$, $p < .05$, indicating that people felt more invested the longer their current relationship was. Attachment avoidance was strongly negatively related to investment in relationship, $\beta = -.31$, $t = 7.37$, $p < .001$. Independent self-construal was negatively related to investment in current relationship, $\beta = -.09$, $t = 2.13$, $p < .05$, while interdependent self-construal was positively related to investment in current relationship, $\beta = .13$, $t = 3.01$, $p < .01$. Finally, both the US-Hong Kong contrast ($\beta = -.22$, $t = 4.81$, $p < .001$) and the US-Mexico contrast ($\beta = -.39$, $t = 7.04$, $p < .001$) were highly significant, indicating that investment to one's relationship was higher in the US than in Hong Kong and Mexico, respectively.

A US-Hong Kong contrast by avoidance interaction, $\beta = -.11$, $t = 2.10$, $p < .05$, indicated that the negative relationship between avoidance and investment was much stronger in Hong Kong than in the US (Figure 6). This shows that the negative effects of avoidance were stronger when societal imperatives favor collectivistic orientations.

A US-Hong Kong contrast by independent self-construal interaction $\beta = -.13$, $t = 2.57$, $p = .01$ indicated that, while there was a relatively weak negative relationship between individualism and investment in the US, this relationship was quite strong in

Hong Kong, again suggesting that being independent in a collectivistic society has negative relationship consequences (Figure 7). No interactions were observed between anxiety and any other variable.

Social Support

The analysis of social support revealed the following main effects. Both avoidance ($\beta = -.33, t = 8.58, p < .001$) and anxiety ($\beta = -.19, t = 5.09, p < .001$) were strongly negatively related to perceived social support. An effect of sex ($\beta = .07, t = 1.96, p = .05$) revealed that women reported receiving more social support than men. A significant main effect of interdependent self-construal ($\beta = .17, t = 4.38, p < .001$) revealed that interdependence was positively related to perceived social support. Finally, significant effects of both the US-Hong Kong contrast ($\beta = -.44, t = 10.46, p < .001$) and the US-Mexico contrast ($\beta = -.16, t = 3.16, p < .01$) revealed that perceived social support was higher in the US than in either Hong Kong or Mexico, respectively.

A US-Hong Kong contrast by avoidance interaction ($\beta = -.24, t = 5.00, p < .001$) revealed that the negative relationship between avoidance and perceived social support was much stronger in Hong Kong than in the US (Figure 8). A US-Mexico contrast by avoidance interaction ($\beta = -.09, t = 2.00, p < .05$) revealed that the negative relationship between avoidance and perceived social support was stronger in Mexico than in the US (Figure 9). Both of these findings support the notion that mismatching cultural norms is associated with worse relationship outcomes.

A US-Mexico contrast by anxiety interaction ($\beta = -.17, t = 3.53, p < .001$) revealed that the negative relationship between anxiety and perceived social support was much stronger in Mexico than in the US (Figure 10).

A US-Hong Kong contrast by independent self-construal interaction ($\beta = -.09, t = 2.03, p < .05$) revealed that, while there was almost no effect of independence on social support in the US, this relationship was moderately negative in Hong Kong. This again suggests that being independent in a collectivistic culture is negatively associated with receiving social support (Figure 11).

Depression

The analyses of depression revealed the following main effects. Participant sex was positively related to depressive symptoms, $\beta = .12, t = 2.95, p < .01$, indicating that women reported greater levels of depressive symptoms than did men. Both avoidance ($\beta = .16, t = 3.73, p < .001$) and anxiety ($\beta = .38, t = 9.18, p < .001$) were strongly positively related to depressive symptoms. Interdependent self-construal was negatively related to depression, $\beta = -.18, t = 4.23, p < .001$. Finally, both the US-Hong Kong contrast ($\beta = .13, t = 2.71, p < .01$) and the US-Mexico contrast ($\beta = .13, t = 2.32, p < .05$) were significant, indicating that depression was lower in the US than in either Hong Kong or Mexico, respectively.

A significant US-Hong Kong contrast by interdependent self-construal interaction ($\beta = -.11, t = 2.08, p < .05$) revealed that, while interdependence was negatively related to depression in both the US and Hong Kong, this relationship was stronger in Hong Kong (Figure 12). This suggests that the positive effects of

interdependence are much stronger in a collectivistic culture. The plot of this interaction reveals that *lack* of interdependence in Hong Kong is associated with a greater amount of depressive symptoms.

All analyses were re-conducted dropping non-significant control variables (age, relationship length, and sex). In these analyses, the results reported above are essentially unchanged. In these new analyses, the p values associated with two significant interactions become non-significant; one value becomes $p < .06$ and the other $p < .07$. One significant main effect (the cultural difference between US and Mexico on depressive symptoms) becomes marginally significant, $p < .07$. For the sake of parallelism and given the significant cultural differences in age and relationship length (see Note 2), the control variables of age, relationship length, and sex are retained for the primary analyses reported in this section.

Mediation of the Attachment Depression Link by Relationship Positivity

A series of exploratory mediational analyses (e.g. Baron & Kenny, 1986) were undertaken to investigate whether the attachment insecurity-depression link was mediated by relationship outcomes. The mediational analyses were conducted within each culture, and focused on mediation of the attachment-depression link by relationship positivity (the sum of the social support, commitment, and relationship satisfaction variables). The conditions needed to test this mediational model (Baron & Kenny, 1986) were met in all cultures under study.

In the US, the relationship between avoidance and depression was not mediated by the relationship positivity variable, Sobel's $z = 1.68$, $p = .09$. In the US, the

relationship between anxiety and depression was not mediated by the relationship positivity variable, Sobel's $z = 1.51, p = .13$.

In Hong Kong, the relationship between avoidance and depression was mediated by the relationship positivity variable, Sobel's $z = 1.92, p = .05$. The direct path from avoidance to depression, $b = .17, t = 3.26, p < .05$, was no longer significant after controlling for the relationship positivity variable, $b = .06, t = .82, p = .41$, indicating that relationship positivity fully mediated the relationship between avoidance and depression in Hong Kong (Figure 13). The anxiety depression relationship, however, was not mediated by relationship positivity in Hong Kong, Sobel's $z = .002, p = 1.0$.

In Mexico, the relationship between avoidance and depression was mediated by the relationship positivity variable, Sobel's $z = 2.20, p = .03$. The direct path from avoidance to depression, $b = .14, t = 2.25, p = .03$, was no longer significant after controlling for relationship positivity, $b = .08, t = 1.26, p = .21$, indicating that relationship positivity fully mediated the relationship between avoidance and depression in Mexico (Figure 14). The anxiety depression relationship was also mediated by relationship positivity in Mexico, Sobel's $z = 2.56, p < .01$. The direct path between anxiety and depression, $b = .19, t = 4.74, p < .001$, was still significant after controlling for relationship positivity, $b = .13, t = 2.94, p < .01$, indicating only partial mediation (Figure 15).

In sum, the relationship between avoidance and depression was fully mediated by relationship positivity in Hong Kong and Mexico, but not in the US. In Mexico, the relationship between anxiety and depression was partially mediated by relationship

positivity. This suggests that in Hong Kong and Mexico, avoidance leads to depression through its negative impact on relationship outcomes. The fact that the avoidance depression link is fully mediated through relationship positivity speaks to the importance of relationships in these cultures, and of the increased detrimental impact of avoidant attachment in Hong Kong and Mexico. In Mexico, anxiety effects depressive symptoms through its impact on relationship positivity, though mediation in this case is only partial.

DISCUSSION

The main results of this study, in regards to the hypotheses first laid out earlier, are as follows:

Hypothesis 1 posited that attachment avoidance and anxiety would be higher in Hong Kong than in the US. The analyses of mean level differences revealed that attachment avoidance and anxiety were higher in Hong Kong than in the US. Though no specific predictions were made about mean levels of avoidance and anxiety between Mexico and the US, the analyses revealed that attachment avoidance (though not anxiety) was higher in Mexico than in the US. In sum, Hypothesis 1, which focused only on mean level differences in attachment insecurity between Hong Kong and the US, was fully supported by the data.

Hypothesis 2 posited that strong negative main effects of attachment avoidance and anxiety would be found on the variables under study, indicating universal effects of adult attachment. The results indicated strong negative main effects of attachment avoidance for all four dependent variables: relationship satisfaction, investment, social support, and depression. Strong negative main effects of attachment anxiety were found for relationship satisfaction, social support, and depression; no main effects of anxiety were found for investment to relationship. However, from a theoretical standpoint, the attachment concerns of avoidant individuals are more pertinent to investment to one's relationship. The concerns with proximity evidenced by anxious individuals have little to do with commitment or investment to a relationship. Thus, though the null result for attachment anxiety in regards to investment was not expected, it is not entirely

inconsistent with attachment theory. In sum, the data indicate that Hypothesis 2 was mostly supported.

Hypothesis 3 posited that independent self-construal would be negatively related to the dependent variables under study. It was also posited that interdependent self-construal could be positively related to the dependent variables under study. The results from this investigation showed that independent self-construal was negatively related to investment, while interdependent self-construal was positively related to relationship satisfaction, investment to one's relationship, perceived social support, and negatively related to depression. Thus, the results for the effects of self-construal were more consistent for interdependence, which had main effects on each dependent variable. The negative main effects of independence were much less consistent, appearing only for investment. However, the negative effects of independence on relationship outcomes appeared more frequently in interaction with cultural context; these results are detailed below in the discussion of Hypothesis 5. In sum, the data indicate that Hypothesis 3 was moderately supported.

Hypothesis 4 posited that the negative impacts of attachment avoidance would be stronger in the more collectivistic societies under study, because avoidant behavior is not only detrimental to relationship development, but such behavior also goes against collectivistic cultural norms. The results were quite clear for Hong Kong. On all three relationship variables under study, satisfaction, investment, and social support, the negative effects of avoidance were stronger in Hong Kong than in the US. The effects for Mexico were fairly consistent, though less so than Hong Kong. The negative effects

of avoidance on relationship satisfaction and on social support were stronger in Mexico than in the US; this pattern of results was not obtained for investment to one's relationship. It is noteworthy that the negative effects of attachment avoidance on depression were equally strong in all cultures. This dependent variable is different in a number of respects to the other three romantic relationship dependent variables. It is possible that avoidant tendencies in collectivistic cultures are only especially damaging to relationship outcomes, and not to other areas of psychological functioning. In sum, the data indicate that Hypothesis 4 was moderately supported.

Hypothesis 5 posited that the negative effects of independent self-construal would be particularly detrimental in collectivistic societies (Hong Kong, and to a lesser extent Mexico). As with Hypothesis 4, the results for Hong Kong were very consistent. For the relationship dependent variables of satisfaction, investment, and social support, the effects of independence were more negative in Hong Kong than in the US. It is worth noting that the effects of independence in the US were negligible (with the exception of the main effect for investment); the strongest and most consistent negative effects of independent self-construal on relationship outcomes were present in Hong Kong. No meaningful interactions between culture contrast and independence were found in Mexico. It is again noteworthy that no main effects or interactions involving independence were found for the dependent variable of depression. This reinforces the idea that the negative impact of mismatching of personal and societal traits is particularly evident on relationship outcomes. In sum, the negative impact of independence was consistently found to be stronger in Hong Kong than in the US.

However, no such effects were found in Mexico. Thus, the data indicate that Hypothesis 5 was moderately supported.

The exploratory mediational analyses showed that relationship positivity fully mediated the link between avoidant attachment and depressive symptoms in Hong Kong and Mexico, but not in the US. Relationship positivity partially mediated the relation between anxious attachment and depressive symptoms in Mexico. These findings, while not specifically predicted, highlight the importance of relationships on feelings of well being in Hong Kong and Mexico. The fact that relationship positivity fully mediated the avoidant attachment depression link in Hong Kong and Mexico (but not in the US) further bolsters the notion that being avoidant in collectivistic societies is especially detrimental to relationship outcomes and psychological well-being.

I will now turn to some noteworthy findings that were not predicted, but that merit further discussion. The interaction between the US-Hong Kong contrast and interdependent self-construal on depressive symptoms is particularly interesting. This interaction shows that, while those with higher levels of collectivism had similar levels of depressive symptoms in both the US and Hong Kong, participants in Hong Kong who were low in collectivism were particularly vulnerable to depressive symptomology. This finding fits in with the cultural mismatching hypothesis advanced in this dissertation, and suggests that a *lack* of interdependence (mismatching cultural norms) in Hong Kong is associated with increased depressive symptoms.

The pattern of mean level differences in the self-construal variables merits further discussion as well. The results from this investigation revealed that there were no

significant differences between Hong Kong and the US in terms of independence, and that (somewhat counter intuitively) Hong Kong was lower in interdependence than was the US. Mexico was found to be higher in independence and lower in interdependence than the US.

There is a growing consensus that mean level differences in self-construal between countries are not always found using self-report Likert scales (Heine et al., 2002; Oyserman et al., 2002). Heine et al. (2002) present evidence showing that referent groups (the other people to whom an individual compares himself when responding to items on Likert scales) are different in each cultural context, and that these referent groups effect responses in ways that obscure underlying cultural differences in self-construal. However, Heine et al. (2002) make the case that the referent group effect is only problematic for comparisons of mean scores from different groups with different referents. The approach taken for the current investigation, that of “unpackaging” cultural differences by investigating the effects of self-construal *within* each culture, circumvents the referent group problem. Indeed, the most interesting and relevant findings regarding self-construal are those that detail effects of these variables within a specific cultural context. Heine et al. (2002) recommend this unpackaging approach as a remedy to the problem of the referent group effect when comparing cultural differences regarding self-construal. An ultimate resolution to the issue of cultural differences in self-reported self-construal is beyond the scope of this dissertation. However, the work of Heine et al. (2002) suggests that the lack of cultural differences in self-construal (in the stereotypical direction) is not a reason to reject the current data out of hand.

Another issue that warrants further comment is the lack of hypothesized interaction effects for independent self-construal in Mexico. The negative effects of independence were hypothesized to be more negative in collectivistic societies (Hong Kong, Mexico) than in the individualistic society (the US). Only moderate effects were expected for Mexico; however, no meaningful interactions were found between the US-Mexico contrast and independent self-construal.

The ultimate pattern of self-construal data for the Mexico-US comparisons suggests that, though Mexico is thought to be a relatively collectivistic society, it is quite similar to the US in regards to the impact of self-construal on relationship outcomes. One possible explanation is the nature of the participants in the current sample. In Mexico (as in the US and in Hong Kong), the participants were university students. Given that students tend to be higher in socioeconomic status (SES) than non-students, and is that SES is positively correlated with higher levels of independence and lower levels of interdependence (e.g. Freeman, 1997), it is possible that the nature of the current sample is obscuring cultural differences that are present in the actual populations at large. Another possibility is that Mexican cultural collectivism is substantially different from Eastern cultural collectivism. Previous writings on Mexican culture reinforce the notion that Mexican society is highly collectivistic and that the Mexican conception of the self is highly interdependent, while highlighting the particular importance of family in the Mexican conception of collectivism (e.g. Diaz-Loving & Draguns, 1999). It is thus possible that the negative effects of individualism might not be evident with romantic relationships, but very evident with familial relationships.

However, this conjecture cannot be addressed with the current data. Another factor that makes it difficult to interpret the self-construal results is the lack of an extensive body of previous work in Mexico in regards to this variable.

One of the most consistent findings in the current investigation was that avoidance and independence were more strongly negatively related to relationship outcomes in Hong Kong than in the US, while avoidance was generally more strongly negatively related to relationship outcomes in Mexico than in the US. As elaborated earlier, this is perhaps due to the fact that attachment avoidance (and independent self-construal in Hong Kong) go against prevailing cultural norms for individuals in collectivistic cultures. Both avoidance and independent self-construal have been shown to have negative effects on relationship outcomes. Previous research has shown that, when individuals' personal characteristics do not match those in their surroundings, they experience negative psychological outcomes. Given the avoidant tendency to desire emotional and physical distance from one's partner, avoidant individuals might experience relationships of poorer quality in Hong Kong and Mexico both because such distancing techniques prohibit intimacy *and* because avoidant tendencies go against prevailing collectivistic cultural norms, which emphasize the importance of relationships. Similar logic can be applied to the negative effects of independent self-construal in Hong Kong. Construing the self as a distinct entity separate from others goes against the cultural collectivistic norm of construing the self as embedded in a network of social relationships with close others. It is possible that this mismatching of cultural norms

contributes to the especially negative effect of independent self-construal on relationship outcomes in Hong Kong.

What do the current results suggest for attachment theory? The present results imply that the effects of adult attachment are in large part universal. Indeed, consistent main effects of attachment avoidance were found for all variables in the present study, and main effects of anxiety were observed on three of the four dependent variables. However, these results also indicate that effects of adult attachment are not completely universal. Significant cultural variation was found with regards to the *strength* of the effects of adult attachment in the different cultures under study. Thus, while these data speak to universal aspects of attachment processes, they also indicate that cultural variation is present and not insignificant. The results of this dissertation suggest that in order to best understand the impact of attachment insecurity on relationships across cultures, one must consider the cultural context in which the individual is embedded.

What do the current results suggest for self-construal research? The present results “unpackage” effects of self-construal by showing that this variable differentially effects relationship and mental health outcomes in different cultures. Specifically, the data presented earlier show that independent self-construal was more strongly negatively related to relationship outcomes in Hong Kong than in the US. While cultural researchers have often assumed that differences in self-construal are responsible for cultural differences in psychological processes, the current finding suggests the more nuanced view that effects of self-construal can differ according to cultural context. Markus and Kitayama (2003), theorizing about the impact of self-construal in Eastern vs.

Western cultures, state that “independence when practiced in Japan will necessarily be different from independence in the United States” because “psychological tendencies require and are shaped by engagement in culture-specific meanings, practices, artifacts, and institutions of particular cultural contexts” (pp. 282). The results from this dissertation clearly provide support for their idea that self-construal functions differently in individualistic vs. collectivistic societies. Another important finding from this dissertation is that interdependent self-construal was found to be negatively associated with depressive symptoms. This finding is consistent with the notion that a sense of connectedness to others is important for the maintenance of positive self-feelings (Baumeister & Leary, 1995; Leary & Baumeister, 2000). Finally, the present results have implications for the conceptualization of self-construal. Self-construal has usually been thought of as a “groupy” variable, emphasizing how individuals conceive of themselves in relation to close others. The present investigation demonstrates the impact of self-construal in a somewhat novel area, providing evidence that this construct has reliable associations with romantic relationship outcomes. These effects (especially the negative effects of independent self-construal) appear particularly strong in an Asian cultural context.

Though this investigation has a number of strong points, it is not without its weaknesses. One of the most important troubling aspects with the present study is the performance of the Experiences in Close Relationships Scale (ECR; Brennan et al., 1998) in Mexico. Specifically, six of the items in the avoidance subscale did not load cleanly on the avoidance subfactor. In addition, the percentage of variance accounted for

by the avoidance factor in Mexico was much lower than the percentage of variance accounted for by this factor in Hong Kong and in the US. However, the sample size of the current data set presents problems for any type of factor analysis. For exploratory factor analysis, recommendations about minimum sample size are quite varied. Some rules of thumb have been proposed; for example: a minimum of 200 subjects (e.g. Gorsuch, 1983), or a subject-to-item ratio of 10 to 1 (e.g. Everitt, 1975; Marascuilo & Levin, 1983). Though recent research has suggested that fixed rules for sample size or ratio of participants to items has its limits (e.g. MacCallum, Widaman, Preacher, & Hong, 2001), it is clear that the size of the Mexican data set is rather small to use exploratory factor analysis to examine the factor structure of the 36-item ECR scale. Furthermore, exploratory factor analysis is just that: exploratory. It can suggest patterns in the underlying structure of data, but it is not meant to confirm or reject *a priori* assumptions about such structure. Future research should use confirmatory factor analysis, with a much larger sample, to examine the factor structure of the ECR scale in Mexico. Such a project is beyond the scope of the current investigation, which was designed to investigate attachment processes across cultures, not to validate the ECR in the countries under study.

Moreover, some positive indicators are present for the performance of the ECR in Mexico. Firstly, the Cronbach's alphas for the avoidance and anxiety subscales were acceptable (.79 and .88, respectively). Secondly, the results of this study suggest convergent validity for the ECR (and particularly the avoidance subscale) in the Mexican data. The effects for the avoidance subscale in Mexico were quite similar to

those results obtained in Hong Kong. Specifically, the Mexican and Hong Kong data indicated similar patterns in the effects of avoidance on relationship outcomes (stronger in these cultures than in the US), and in the analyses indicating mediation of the avoidance-depression link by relationship positivity (fully mediated in both cultures). In sum, the data show both discouraging and encouraging information about the performance of the ECR in Mexico. On the one hand, the exploratory factor analysis suggests that the avoidance subscale does not perform as well in Mexico as in Hong Kong and the US. However, inadequate sample size and other issues prevent the exploratory factor analysis from being conclusive regarding this matter. On the other hand, some indicators (Cronbach's alpha and convergent validity) suggest that the ECR performed at least moderately well in the Mexican cultural context.

Having examined some of the weaknesses of the current study, I now consider some of its strengths. The current study was designed to address the lack of cross-cultural research on the attachment process in adulthood. The present investigation has several advantages over past cultural and cross-cultural research in this area. Firstly, this study employed a multi-item measure of adult attachment, the Experiences in Close Relationships Scale. This measure allows for greater precision in measuring the facets of avoidance and anxiety and permits more sophisticated analyses of the resulting continuous data; previous cultural research on attachment has mainly used categorical forced choice measures that have precision and data analytic drawbacks. Secondly, this investigation included a measure of the individual difference variable (self-construal) thought to underlie some of the most salient differences between Eastern and Western

cultures. Thus, rather than exclusively testing broad cultural differences based on cultural provenance of participants, this research permitted examining differential effects of these variables in separate cultural contexts (Matsumoto, 1999; Oyserman et al., 2002; Singelis & Brown, 1995). Thirdly, this study was broader in scope than much previous research on culture and attachment in that it did not focus simply on mean level differences across cultures. Indeed, a noteworthy and important advantage of the present investigation is that the present study investigates the how the impact of these constructs differs according to cultural context. The results provide novel findings on what it *means* to be insecurely attached and independent (or interdependent) in differing cultural contexts.

General Psychology, Cultural Psychology, and Cross-Cultural Psychology

The final section of this discussion deals with the theoretical and empirical distinctions between three different branches of psychology, in an attempt to situate the current work within them. I first begin with a description of the overall theoretical orientations of general psychology, cultural psychology, and cross-cultural psychology. I then explain how the approach of the current work is similar and dissimilar to each approach.

The basic idea of general psychology has been described as the notion that individuals are the same everywhere (e.g. Shweder, 1990). The underlying assumption of this approach is that humans have a central processing mechanism inherent in human beings; this mechanism is the same and functions in more or less the same manner in

every culture in the world. From this perspective, there is little utility to studying psychological processes in a cultural context.

Cross-cultural psychology has been described in slightly divergent ways by its detractors and supporters. Shweder (1990), a skeptic of the goals of cross-cultural psychology, depicts cross-cultural psychology as a subdiscipline of general psychology. Shweder argues that these two disciplines share the underlying goal of characterizing the inherent, universal processing mechanisms of mental life. As such, Shweder (2000) contends that the goal of cross-cultural psychology is nothing more than determining “the boundary conditions for generalizations generated in Western labs with Western (mostly college student) subjects” (pp. 212), with a related goal of making sure “that the hoped-for universal psychology is truly universal and to throw out any claim that only holds in the Anglo-American world” (pp. 212). Adamopoulos and Lonner (2001), cross-cultural researchers more sympathetic to the discipline, put a more positive spin on this idea, stating that the goal of cross-cultural psychology is to “investigate the robustness or generalizability of psychological findings that many... consider to be true and invariant” (pp. 15) with the ultimate goal of establishing a “universal psychology” (pp. 18). One of the staple research methods of cross-cultural psychology, according to Adamopoulos and Lonner (2001), is to compare various psychological processes across cultures, using cultural context as an independent variable. Adamopoulos and Lonner (2001) note that this tendency to use cultural as a dichotomized, discrete variable has been raised a significant criticism of cross-cultural psychology. Thus, the cross-cultural perspective is most useful for testing the universality of Western psychological theories, and to

investigate cultural influences on psychological processes that have originally been demonstrated in a given cultural context.

The goal of cultural psychology, by contrast, is to study the mutual influence and constitution of culture and the self (e.g. Shweder, 1990), and to understand the individual in a historical and sociocultural context (Adamopoulos & Lonner, 2001). According to cultural psychology, the mind “cannot be extricated from the historically variable and cross-culturally diverse international worlds in which it plays a coconstituting part” (Shweder, 1990, pp. 13). Thus, from the perspective of cultural psychology, “there are no pure psychological laws” (Shweder, 1990, pp. 24) and there are no presumptions of a universal processing mechanism that are the hallmark of general and cross-cultural psychology. The focus of cultural psychology is on “differences in the way members of different communities perceive, categorize, feel, want, choose, evaluate and communicate that can be traced to differences in salient community-based ‘goals, values and pictures of the world’” (pp. 213). As such, the research methodologies of cultural psychology are very diverse, ranging from quantitative to qualitative/ethnographic (Adamopoulos & Lonner, 2001). Heine (2001), describing cultural psychological research on the self, notes that “cultural psychologists are... more likely to prefer methodologies that examine the self in situ and tend to interpret their findings within the context of the culture under study” (pp. 884). Thus, the cultural perspective is most useful for understanding psychological processes *within* a given culture, and to gain a more thorough understanding of the mutual influence and constitution between the self and the culture as a whole.

Where does the current study fit in within these theoretical and empirical frameworks? The goals of this study were to examine attachment theory and self-construal in a cultural context, and to investigate and compare the influences of adult attachment and self-construal on variables related to relationship quality and mental health in the US, Hong Kong, and Mexico. As such, the overall goal of comparing and contrasting the influences of psychological variables in different cultural contexts fits in most closely with the cross-cultural psychological perspective. In addition, the analytic strategy of using culture as an independent variable has its roots firmly within the cross-cultural psychological tradition. Finally, the assumption that the impact of adult attachment would turn out to be (at least somewhat) universal is very much in line with the perspective of cross-cultural psychology. However, the tactic of examining the impacts of attachment and self-construal *within* each culture, and then interpreting these findings within the context of the studied cultures seems more in keeping with the cultural psychological tradition (as described by Heine (2001)). Thus, this research study is situated somewhere between the perspectives of both cross-cultural and cultural psychology. Accordingly, I see this study as reaping the benefits of both the cross-cultural approach (testing the cultural generalizability of Western theories) and the cultural approach (testing the effects of attachment and self-construal within each culture under study).

CONCLUSION

In sum, the main conclusion from this study is that, while the effects of adult attachment are largely universal in the US, Mexico, and Hong Kong, cultural variation in the impact of adult attachment on relationship outcomes is present. Specifically, the findings presented earlier suggest that being avoidant is more detrimental to relationship outcomes in collectivistic societies (Hong Kong and Mexico). Secondary findings showed that independent self-construal was particularly detrimental to relationship outcomes in Hong Kong. Both of these findings are interpreted in light of the cultural fit hypothesis: that lack of concordance among one's own personal characteristics and societal characteristics is detrimental to relationship outcomes. The present work adds to the literature by presenting a more nuanced view of the implications of attachment insecurity and self-construal across cultures. The overall pattern of data reinforces the idea that, in order to best understand the impact of adult attachment and self-construal on relationship outcomes, one must take into account the cultural context of the individuals under study.

NOTES

¹ The coding scheme makes the US the referent group for comparisons. It does not allow one to compare mean differences and interactions between Hong Kong and Mexico. However, the goal of this study was to investigate whether attachment variables affect outcomes in Hong Kong and in Mexico in a similar or different manner to that in the United States. The present coding scheme allows one to answer precisely these questions.

² One way ANOVAs using culture as an independent variable revealed significant cultural differences in age, $F(2, 565) = 168.85, p < .001$, and relationship length, $F(2, 559) = 14.19, p < .001$. Tukey post hoc tests for age revealed a linear pattern of means, such that participants were oldest in Mexico ($M = 23.34$), followed by Hong Kong ($M = 20.44$) and then the US ($M = 19.03$); all between culture differences were significant, p 's $< .05$. Tukey post hoc tests for relationship length revealed that relationship length was greater in Hong Kong ($M = 23.47$) than in the US ($M = 17.12$), and greater in Mexico ($M = 28.70$) than in the US, both p 's $< .05$. There was no significant difference between relationship length in Hong Kong compared to Mexico. Due to these significant differences, all primary analyses reported in this dissertation control for both age and relationship length.

³ During the course of these analyses, 48 two-way interactions were examined. Using the standard significance value of $p < .05$, one would expect that 2 or 3 interactions would be obtained purely by chance. All significant two-way interactions were examined; two uninterpretable interactions occurred. These interactions are reported in the tables, but are not discussed in the main text.

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APPENDIX A

TABLES AND FIGURES

Table 1: Exploratory Factor Analysis of the Experiences in Close Relationships (ECR) Scale

ECR Item	US		Hong Kong		Mexico	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
1	.17	.57	-.01	.54	-.01	.52
2	.74	.10	.74	.05	.62	-.01
3	.01	.61	-.13	.66	.30	.34
4	.68	.17	.60	.41	.50	-.07
5	.23	.68	.16	.69	.11	.65
6	.66	.20	.62	.15	.62	.08
7	.12	.55	.08	.67	.02	.51
8	.73	.17	.67	.06	.44	-.05
9	.15	.65	.17	.64	.20	.44

ECR Item	US		Hong Kong		Mexico	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
10	.54	.13	.59	-.09	.57	-.08
11	.23	.70	.27	.55	.15	.70
12	.54	.10	.40	.38	.28	.09
13	.25	.70	.29	.65	.20	.51
14	.78	.09	.58	-.07	.69	.05
15	-.12	.56	-.05	.59	-.12	.41
16	.51	.19	.46	.34	.51	.17
17	.24	.70	.20	.55	-.09	.69

Table 1 (continued)

ECR Item	US		Hong Kong		Mexico	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
18	.68	-.04	.60	-.07	.61	-.08
19	-.03	.57	-.07	.41	.10	.32
20	.57	-.07	.50	-.11	.72	.04
21	.15	.40	-.06	.49	-.22	.29
22	.64	.14	.70	.03	.37	-.08
23	.11	.66	.00	.64	-.09	.73
24	.57	-.03	.39	.02	.55	.14
25	-.07	.67	-.08	.70	-.02	.46

Table 1 (continued)

ECR Item	US		Hong Kong		Mexico	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
26	.45	.20	<i>.31</i>	<i>.36</i>	.49	.28
27	-.07	.77	-.12	.61	-.13	.42
28	.60	-.02	.45	.03	.52	.13
29	-.11	.48	-.14	.59	<i>-.48</i>	<i>.19</i>
30	.62	-.21	.51	-.06	.74	-.06
31	-.06	.68	-.15	.49	<i>-.17</i>	<i>.17</i>
32	.61	-.14	.47	-.21	.60	.03
33	-.16	.67	.08	.46	<i>-.36</i>	.28
34	.58	-.16	.27	-.06	.58	-.05

Table 1 (continued)

ECR Item	US		Hong Kong		Mexico	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
35	-.33	.51	-.32	.56	-.39	<i>.04</i>
36	.56	-.05	.46	.11	.67	-.13
Total Variance Explained (percentage)	20.57	20.52	15.49	19.12	18.67	11.42

Note: Odd numbered items comprise the avoidance subscale (Factor 2); even numbered items comprise the anxiety subscale (Factor 1). Factor loadings which appear on the appropriate factor are listed in bold; factor loadings which do not appear uniquely on the correct factor are listed in italics.

Table 2: Exploratory Factor Analysis of the Individualism/Collectivism (IC) Scale

IC Item	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
1	.26	.02	.75	.02	.65	.08
2	.23	-.03	.86	.07	.71	.11
3	.17	-.04	.48	-.08	.85	.10
4	.25	.18	.49	.01	.54	.07
5	.61	.13	.24	.08	<i>.41</i>	<i>.42</i>
6	.75	-.12	.16	.03	<i>.11</i>	<i>.28</i>
7	.60	.07	<i>.06</i>	<i>.12</i>	<i>.11</i>	<i>.27</i>
8	.59	-.08	<i>-.19</i>	<i>.16</i>	<i>-.04</i>	<i>.26</i>

Table 2 (continued)

IC Item	US		Hong Kong		Mexico	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
9	-.20	.48	-.15	-.07	.14	.44
10	-.14	.43	-.01	.19	.05	.59
11	-.11	.58	.17	.11	.20	.42
12	-.15	.69	.18	.22	.10	.62
13	.15	.48	.15	.48	.11	.65
14	.17	.49	.05	.76	.10	.38
15	.24	.39	-.11	.86	-.02	.52
16	.04	.42	.08	.57	.10	.52

Table 2 (continued)

	US		Hong Kong		Mexico	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
Total Variance Explained (percentage)	25.86	13.12	12.71	25.40	30.49	16.52

Note: Items 1 - 8 comprise the independent self-construal subscale (Factor 1); items 9 – 16 comprise the interdependent self-construal subscale (Factor 2). Factor loadings which appear uniquely on the appropriate factor are listed in bold; factor loadings which do not appear uniquely on the correct factor are listed in italics.

Table 3: Exploratory Factor Analysis of the Relationship Satisfaction Scale

Relationship Satisfaction Item	US	Hong Kong	Mexico
1	.79	.86	.54
2	.91	.89	.91
3	.77	.81	.84
4	.54	.62	.44
5	.54	.88	.71
6	.53	.69	.67
7	.58	.60	.41
Total Variance Explained (percentage)	46.24	59.84	44.84

Table 4: Exploratory Factor Analysis of the Investment Model (IMS) Scale

IMS Item	US	Hong Kong	Mexico
Commitment 1	.67	.66	.67
Commitment 2	.74	.81	.31
Commitment 3	.31	.82	.12
Commitment 4	.74	.73	.65
Commitment 5	.65	.46	.52
Satisfaction 1	.79	.79	.84
Satisfaction 2	.67	.83	.85
Satisfaction 3	.70	.73	.84
Satisfaction 4	.79	.71	.85

Table 4 (continued)

IMS Item	US	Hong Kong	Mexico
Alternatives 1	.39	.42	.36
Alternatives 2	.29	.18	.22
Alternatives 3	.13	.26	.01
Alternatives 4	.64	.45	.49
Investment 1	.42	.31	.32
Investment 2	.19	.06	-.06
Investment 3	.30	-.05	.05

Table 4 (continued)

IMS Item	US	Hong Kong	Mexico
Investment 4	.43	.55	
Total Variance Explained (percentage)	31.80	33.78	28.94

Note: The Investment 4 question was not asked in Mexico due to an experimenter error.

Table 5: Exploratory Factor Analysis of the Social Support Scale

Social Support Item	US	Hong Kong	Mexico
1	.69	.72	.83
2	.69	.68	.85
3	.56	.54	.63
4	.65	.71	.86
5	.85	.92	.27
6	.76	.88	.85
7	.77	.77	.90
Total Variance Explained (percentage)	51.02	57.12	59.47

Table 6: Exploratory Factor Analysis of the CESD Depression Scale

CESD Item	US	Hong Kong	Mexico
1	.42	.34	.43
2	.39	.14	.55
3	.74	.69	.55
4	.51	.60	.45
5	.45	.37	.57
6	.81	.82	.76
7	.22	.65	.46
8	.46	.60	.50
9	.51	.70	.61

Table 6 (continued)

CESD Item	US	Hong Kong	Mexico
10	.52	.76	.60
11	.42	.31	.39
12	.77	.78	.67
13	.46	.36	.48
14	.59	.64	.74
15	.40	.59	.56
16	.77	.69	.65
17	.42	.45	.66
18	.76	.76	.76

Table 6 (continued)

CESD Item	US	Hong Kong	Mexico
19	.50	.66	.60
20	.58	.56	.69
Total Variance Explained (percentage)	30.88	36.12	35.08

Table 7: Means and Standard Deviations by Culture for the Primary Variables

	US			Hong Kong			Mexico		
	M	SD	N	M	SD	N	M	SD	N
Avoidance	42.80	16.45	209	47.76	15.52	153	51.03	14.69	158
Anxiety	61.02	20.51	209	68.41	16.75	150	63.61	20.74	166
Individualism	28.67	4.57	212	29.44	3.88	152	29.86	4.90	187
Collectivism	31.71	4.06	212	29.35	3.84	152	30.57	4.95	190
Relationship Satisfaction	5.86	0.89	211	4.98	1.17	151	5.44	1.07	190
Social Support	44.03	4.57	213	37.11	6.41	153	40.44	9.34	198
Investment	6.70	0.95	212	6.26	0.90	153	5.86	1.17	172
Depression	31.84	8.85	210	34.32	10.08	151	34.03	11.27	179

Table 8: Regression Coefficients for Analyses of Relationship Satisfaction

Main Effects				Interactions with Avoidance			Interactions with Anxiety			Interactions with Self-Construal					
	<i>B</i>	<i>t</i>	<i>p</i>		β	<i>t</i>	<i>p</i>		β	<i>t</i>	<i>p</i>		β	<i>t</i>	<i>p</i>
Age	-.03	.46	.65	US-HK * Avd	-.24	4.89	.001	US-HK * Anx	-.10	2.25	.03	US-HK * Indep	-.14	3.02	.003
Months with Partner	-.03	.65	.52	US-MX * Avd	-.10	2.10	.04	US-MX * Anx	-.17	3.58	.001	US-HK * Interdep	.06	1.21	.23
Sex	.03	.66	.51	Avd * Interdep	-.01	.35	.73	Anx * Interdep	.08	2.15	.03	US-MX * Indep	.04	.76	.45
Avd	-.35	8.88	.001	Avd * Interdep	.01	.21	.83	Anx * Interdep	-.02	-.60	.55	US-MX * Interdep	-.02	.39	.70
Anx	-.27	7.00	.001												
Indep	-.01	.12	.91												
Interdep	.12	3.01	.01												

Table 8 (continued)

	Main Effects			Interactions with Avoidance			Interactions with Anxiety			Interactions with Self-Construal		
	<i>B</i>	<i>t</i>	<i>p</i>	<i>β</i>	<i>t</i>	<i>p</i>	<i>β</i>	<i>t</i>	<i>p</i>	<i>β</i>	<i>t</i>	<i>p</i>
US-HK Contrast	-.38	8.83	.001									
US-MX Contrast	-.16	3.19	.01									

Note: Values for interactions with self-construal are taken from the analyses involving the anxiety interactions (self-construal interactions were present in both the analyses involving avoidance and those involving anxiety). The self-construal interaction results are similar in both analyses; using one set of analyses or the other does not change the results reported in this dissertation.

Table 9: Regression Coefficients for Analyses of Investment Model Scales

	Main Effects			Interactions with Avoidance			Interactions with Anxiety			Interactions with Self-Construal					
	β	t	p	β	t	p	β	t	p	β	t	p			
Age	-.01	-.01	.93	US-HK * Avd	-.11	2.10	.04	US-HK * Anx	-.05	.98	.33	US-HK * Indep	-.13	2.57	.01
Months with Partner	.10	2.08	.04	US-MX * Avd	-.07	1.36	.17	US-MX * Anx	-.07	1.39	.16	US-HK * Interdep	-.01	.15	.88
Sex	.08	1.91	.06	Avd * Indep	.02	.53	.60	Anx * Indep	.01	.21	.83	US-MX * Indep	.01	.16	.88
Avd	-.31	7.37	.001	Avd * Interdep	.001	.02	.98	Anx * Interdep	-.02	.37	.72	US-MX * Interdep	.07	1.25	.21
Anx	.03	.63	.53												
Indep	-.09	2.13	.03												
Interdep	.13	3.01	.003												

Table 9 (continued)

Main Effects				Interactions with Avoidance			Interactions with Anxiety			Interactions with Self-Construal		
	β	t	p	β	t	p	β	t	p	β	t	p
US-HK Contrast	-.22	4.81	.001									
US-MX Contrast	-.39	7.04	.001									

Table 10: Regression Coefficients for Analyses of Social Support

	Main Effects			Interactions with Avoidance			Interactions with Anxiety			Interactions with Self-Constraint					
	β	t	p		β	t	p		β	t	p	β	t	p	
Age	-.09	1.71	.09	US-HK * Avd	-.24	5.00	.001	US-HK * Anx	-.06	1.41	.16	US-HK * Indep	-.09	2.03	.04
Months with Partner	-.03	.72	.47	US-MX * Avd	-.09	2.00	.05	US-MX * Anx	-.17	3.53	.001	US-HK * Interdep	.01	.29	.78
Sex	.07	1.96	.05	Avd * Indep	-.01	.17	.87	Anx * Indep	.07	.18	.07	US-MX * Indep	.09	1.80	.07
Avd	-.33	8.58	.001	Avd * Interdep	- .003	.08	.94	Anx * Interdep	.01	.28	.78	US-MX * Interdep	-.04	.77	.45
Anx	-.19	5.09	.001												
Indep	.03	.86	.39												
Interdep	.17	4.38	.001												

Table 10 (continued)

	Main Effects			Interactions with Avoidance			Interactions with Anxiety			Interactions with Self-Construal		
	β	t	p	β	t	p	β	t	p	β	t	p
US-HK Contrast	-.44	10.46	.001									
US-MX Contrast	-.16	3.16	.002									

Table 11: Regression Coefficients for Analyses of Depression

	Main Effects			Interactions with Avoidance			Interactions with Anxiety			Interactions with Self-Construal					
	β	t	p	β	t	p	β	t	p	β	t	p			
Age	-.08	1.30	.20	US-HK * Avd	.06	1.04	.30	US-HK * Anx	.07	1.28	.20	US-HK * Indep	-.06	1.19	.24
Months with Partner	.01	.26	.80	US-MX * Avd	.09	1.67	.10	US-MX * Anx	.05	.87	.38	US-HK * Interdep	-.11	2.08	.04
Sex	.12	2.95	.003	Avd * Indep	-.003	.07	.95	Anx * Indep	-.05	1.25	.21	US-MX * Indep	-.12	2.00	.05
Avd	.16	3.73	.001	Avd * Interdep	-.04	.90	.37	Anx * Interdep	-.02	.40	.69	US-MX * Interdep	-.03	.47	.64
Anx	.38	9.18	.001												
Indep	-.02	.53	.60												
Interdep	-.18	4.23	.001												

Table 11 (continued)

	Main Effects			Interactions with Avoidance			Interactions with Anxiety			Interactions with Self-Construal		
	β	t	p	β	t	p	β	t	p	β	t	p
US-HK Contrast	.13	2.71	.007									
US-MX Contrast	.13	2.32	.02									

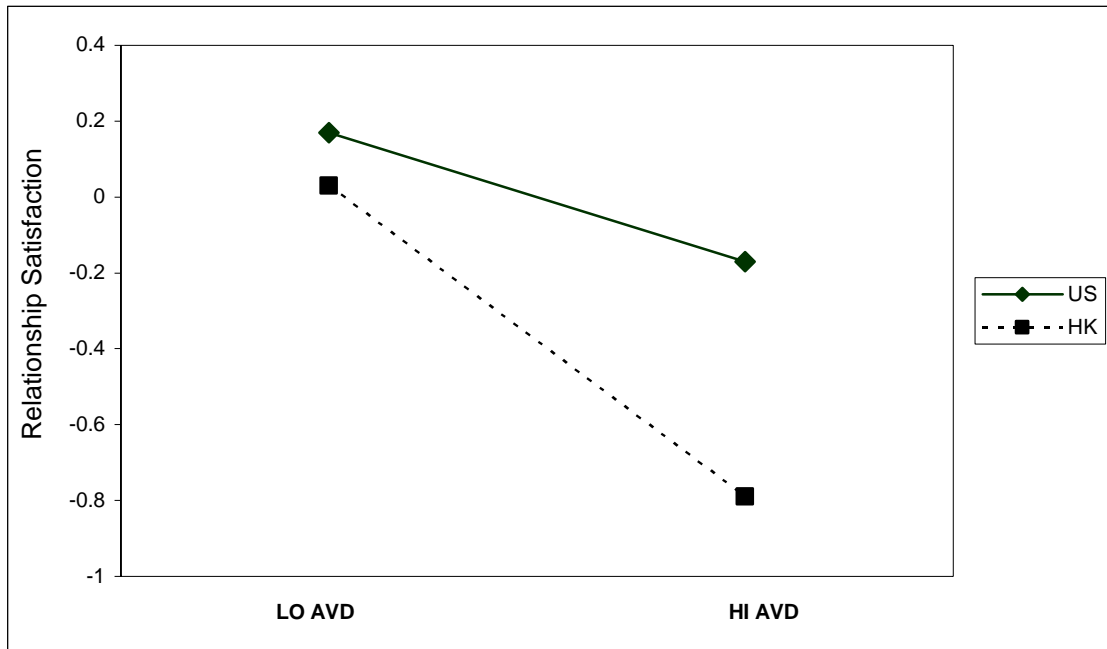


Figure 1: US-Hong Kong Contrast by Avoidance Interaction: Relationship Satisfaction

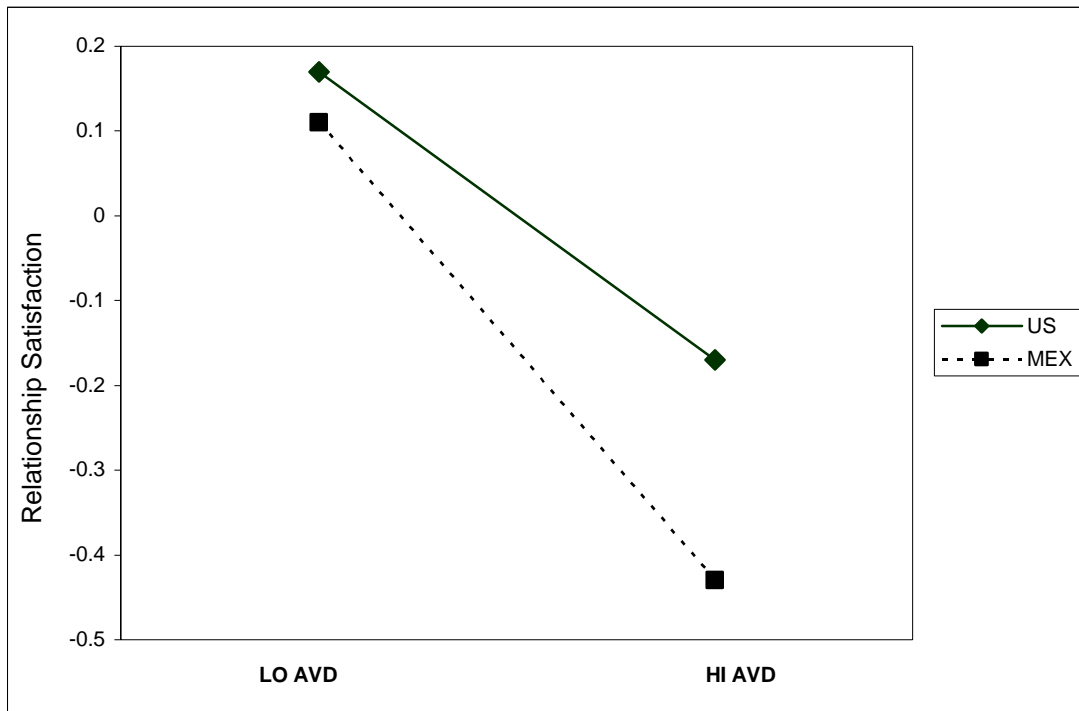


Figure 2: US-Mexico Contrast by Avoidance Interaction: Relationship Satisfaction

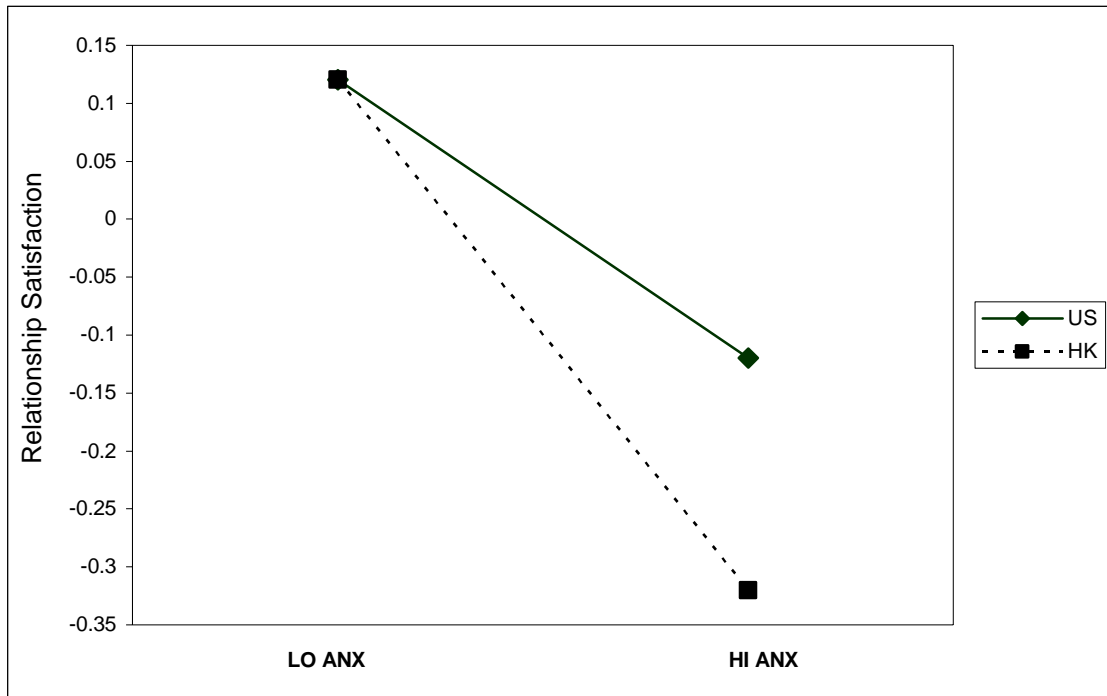


Figure 3: US-Hong Kong Contrast by Anxiety Interaction: Relationship Satisfaction

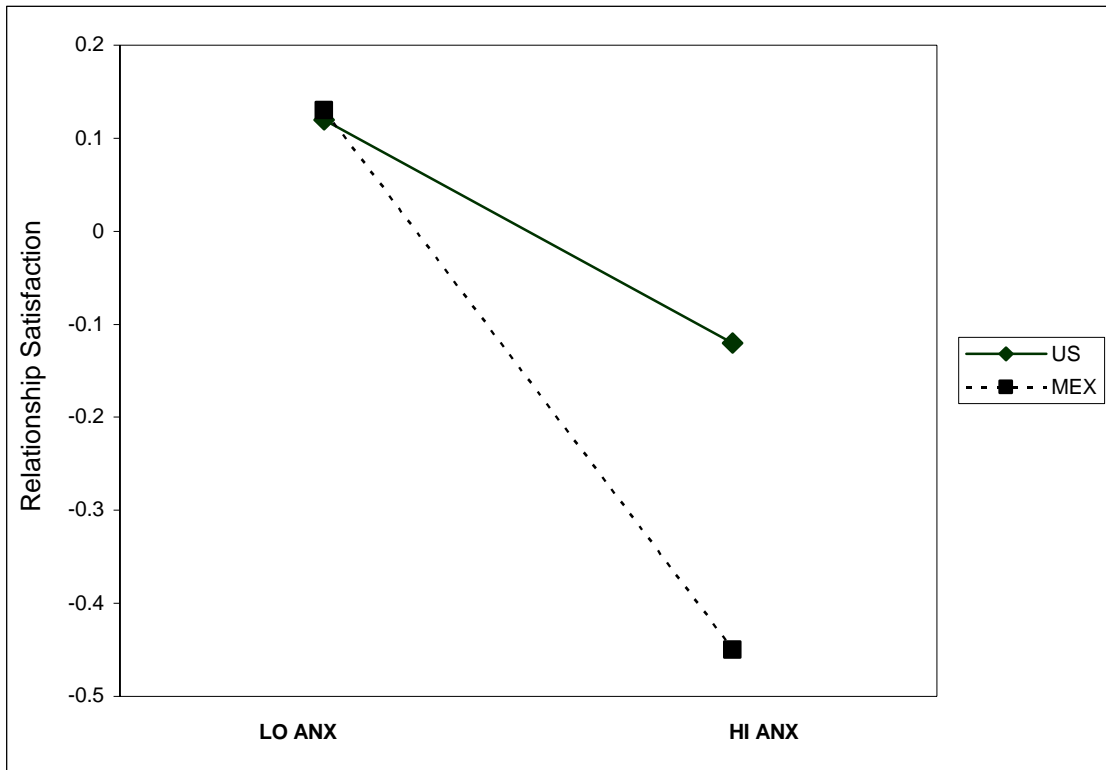


Figure 4: US-Mexico Contrast by Anxiety Interaction: Relationship Satisfaction

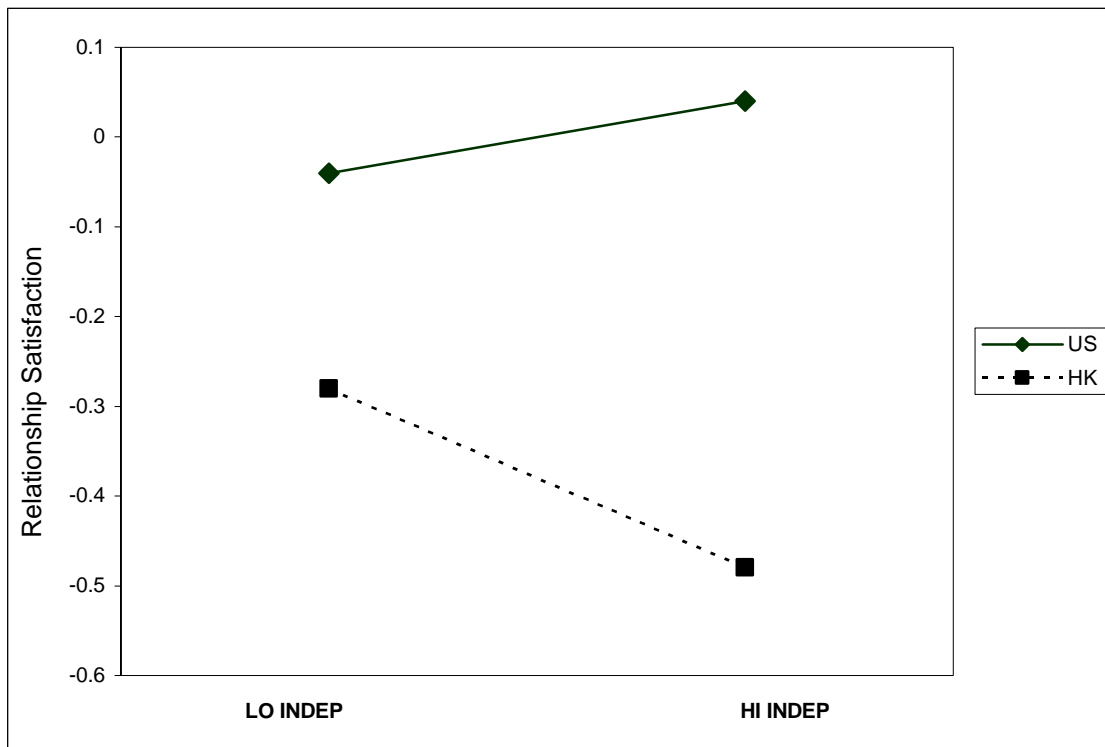


Figure 5: US-Hong Kong Contrast By Independent Self-Construal Interaction: Relationship Satisfaction

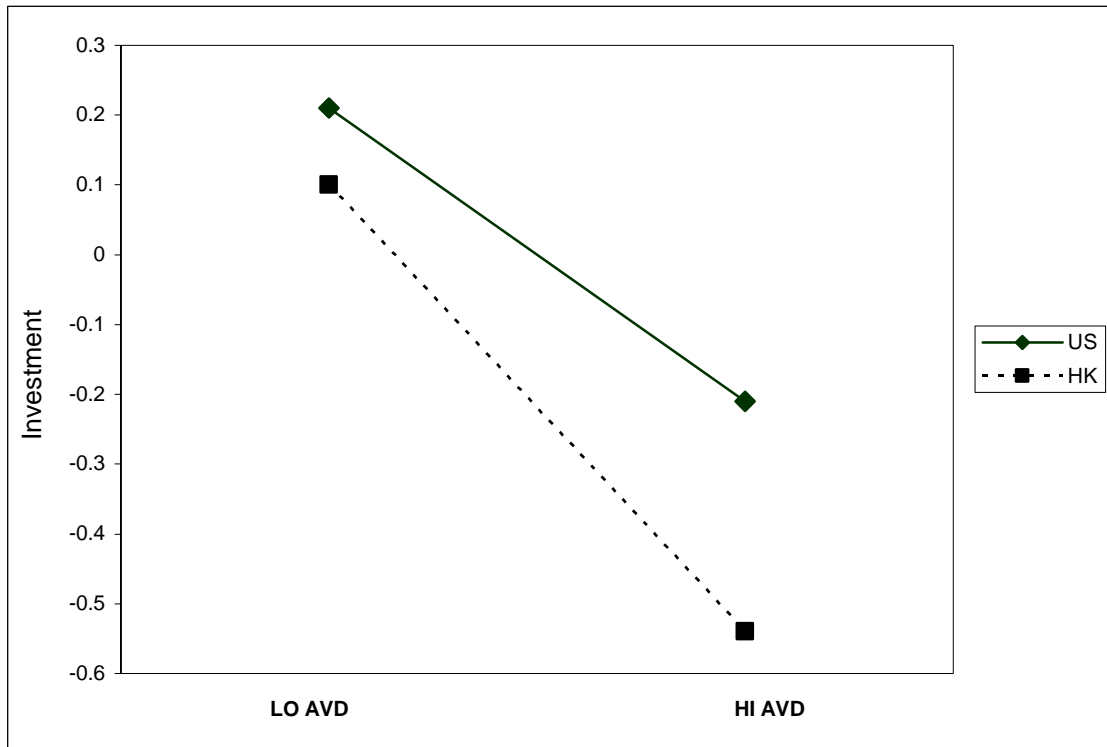


Figure 6: US-Hong Kong Contrast Avoidance Interaction: Investment Model Scales

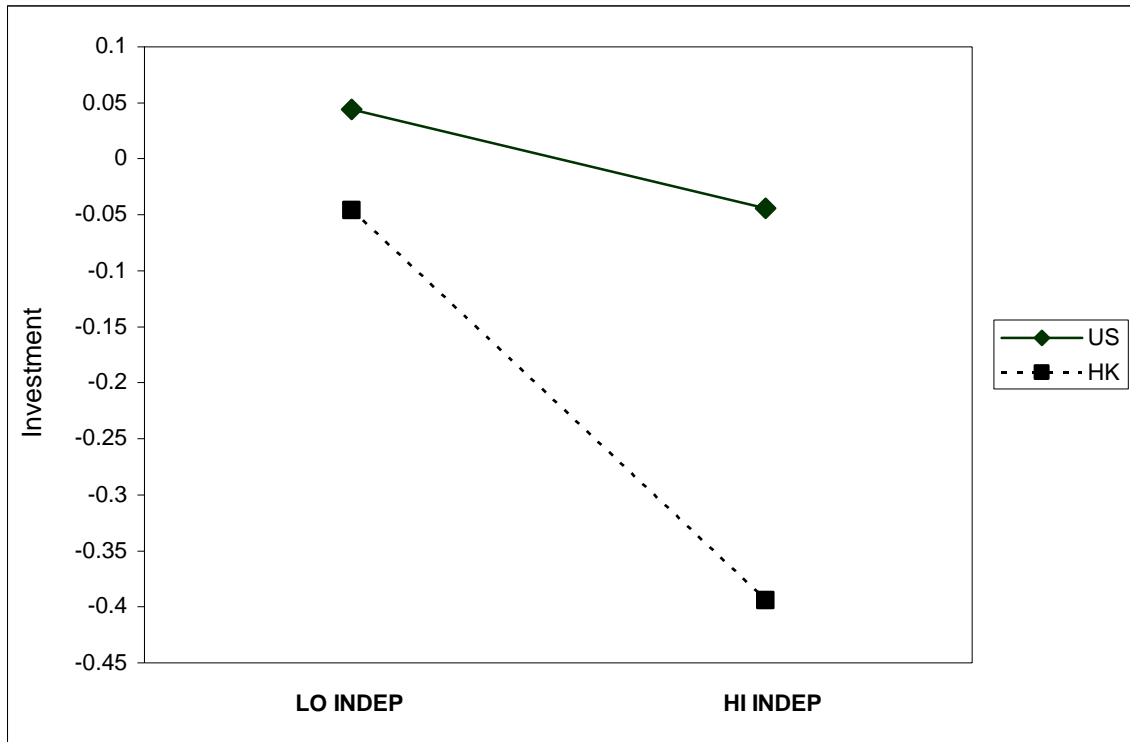


Figure 7: US-Hong Kong Contrast by Independent Self-Construal Interaction: Investment Model Scales

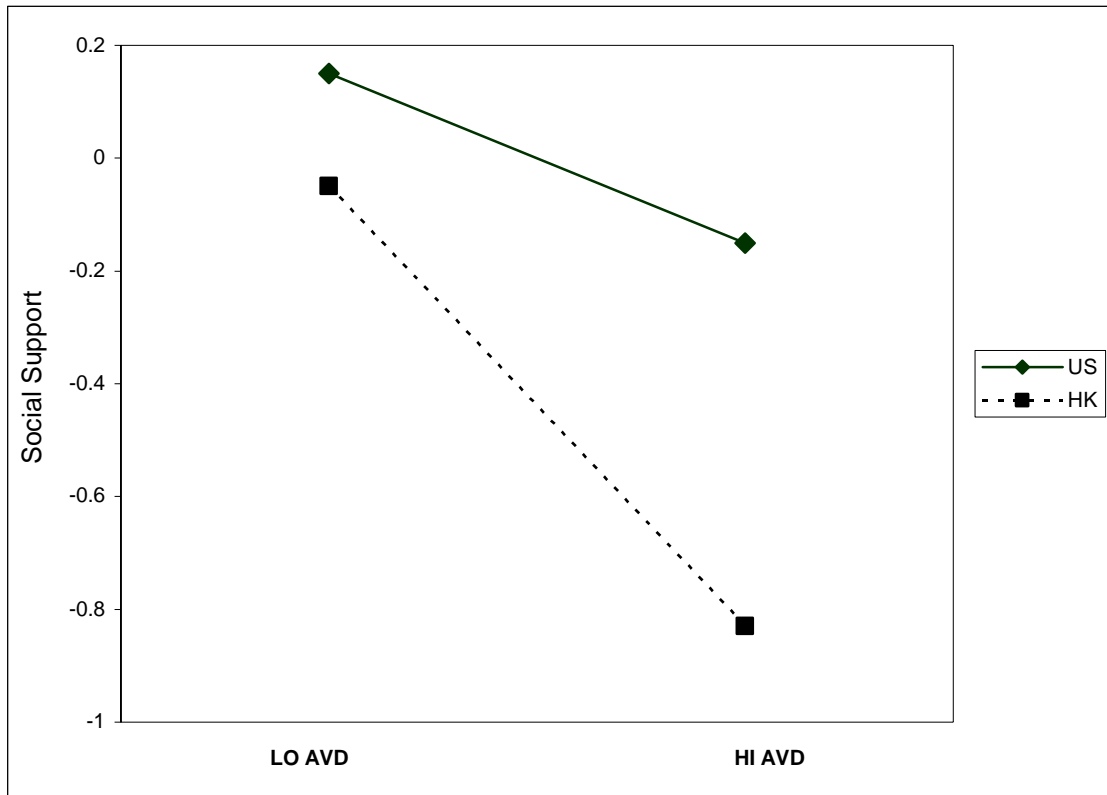


Figure 8: US-Hong Kong Contrast by Avoidance Interaction: Social Support

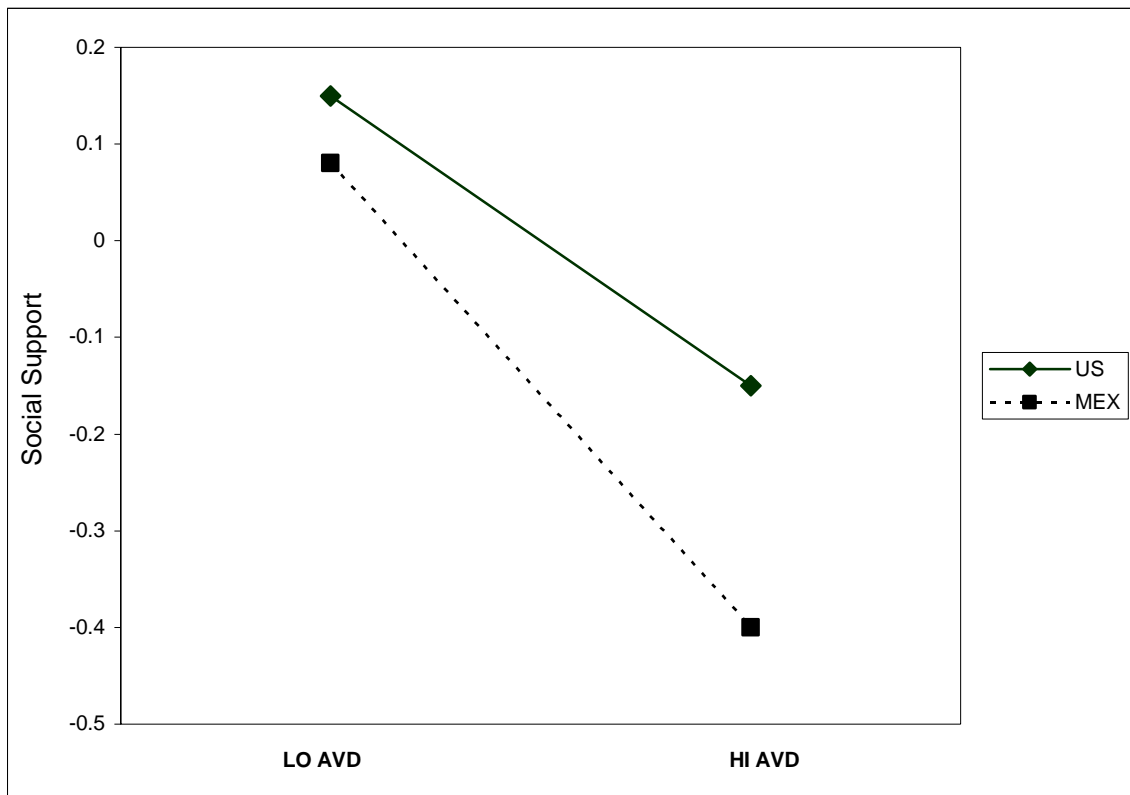


Figure 9: US-Mexico Contrast by Avoidance Interaction: Social Support

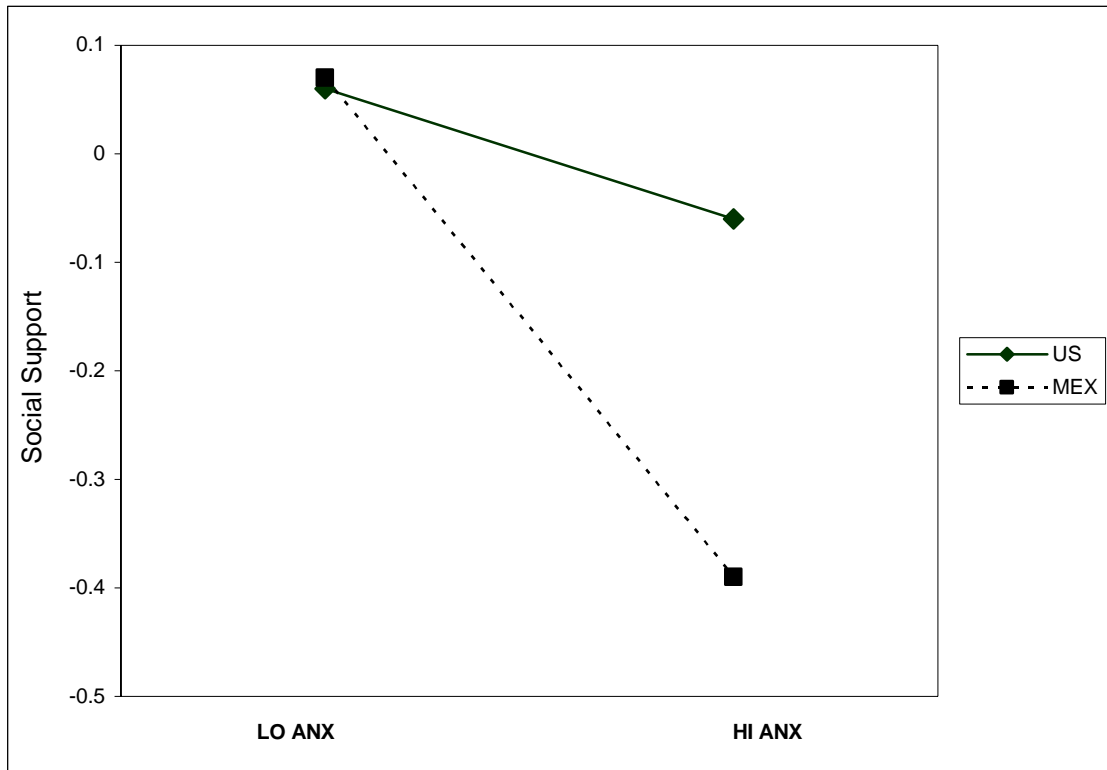


Figure 10: US-Mexico Contrast by Anxiety Interaction: Social Support

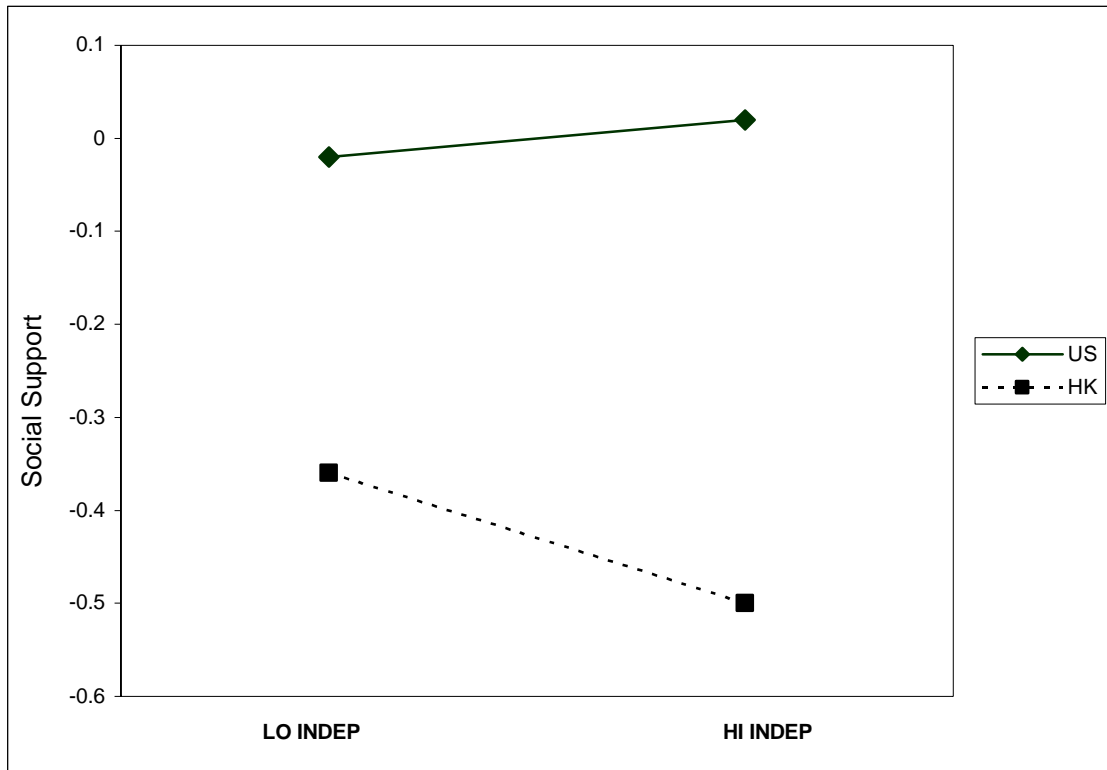


Figure 11: US-Hong Kong Contrast by Independent Self-Constraint Interaction: Social Support

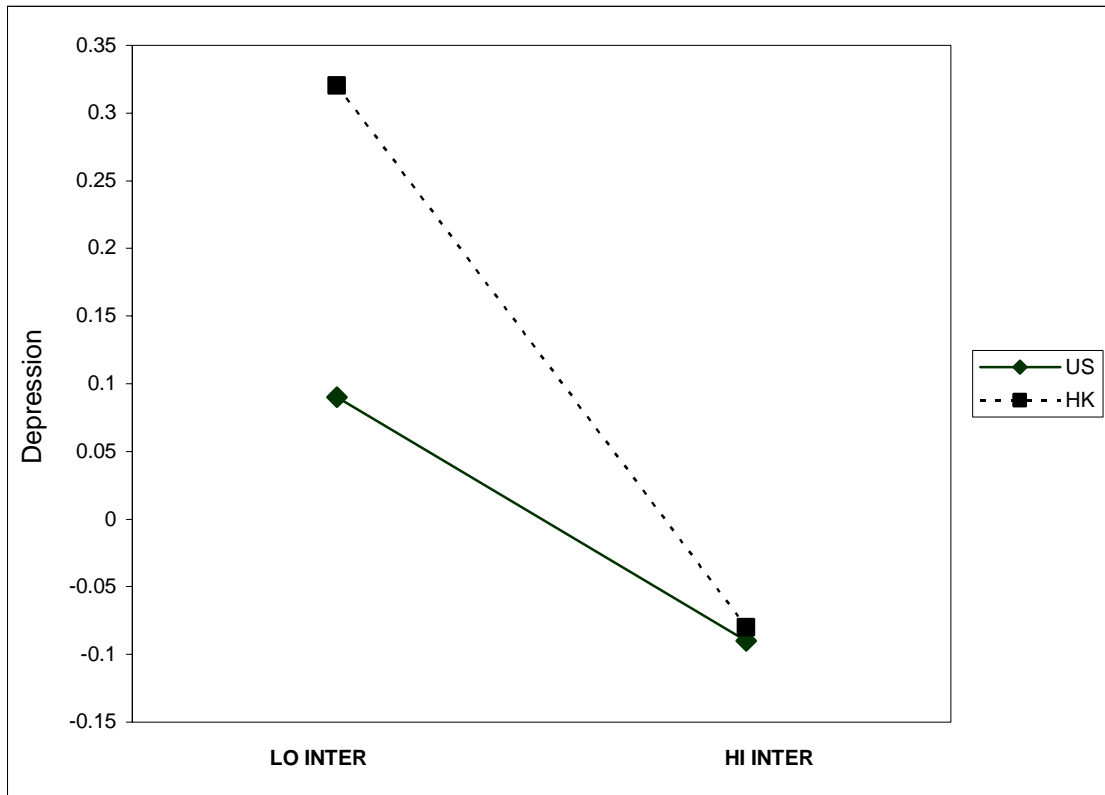


Figure 12: US-Hong Kong Contrast by Interdependent Self-Conceptual Interaction: Depression

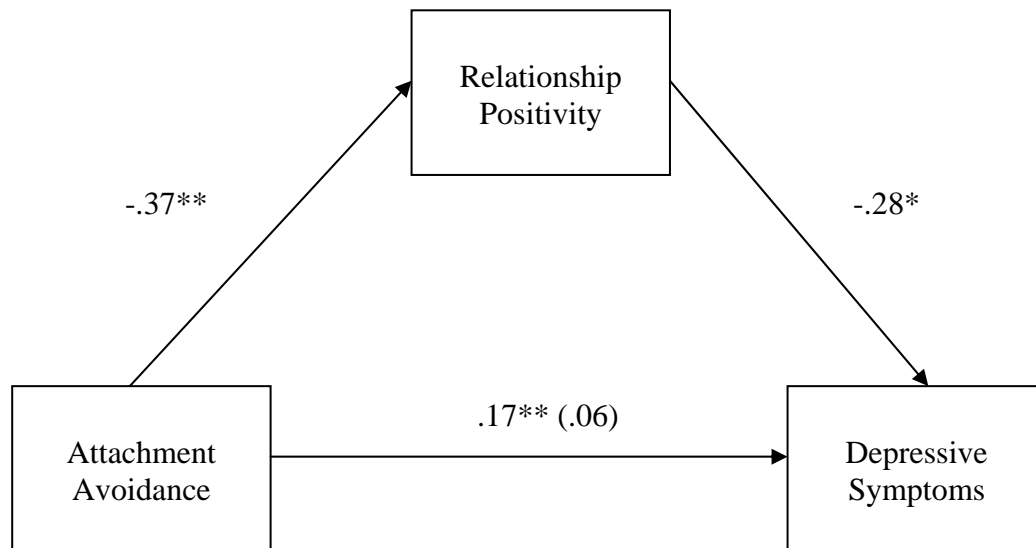


Figure 13: Mediation of the Avoidance-Depression Link by Relationship Positivity: Hong Kong

Note: The beta in parentheses is the relation between attachment avoidance and depressive symptoms, controlling for relationship positivity. * $p = .05$, ** $p < .01$

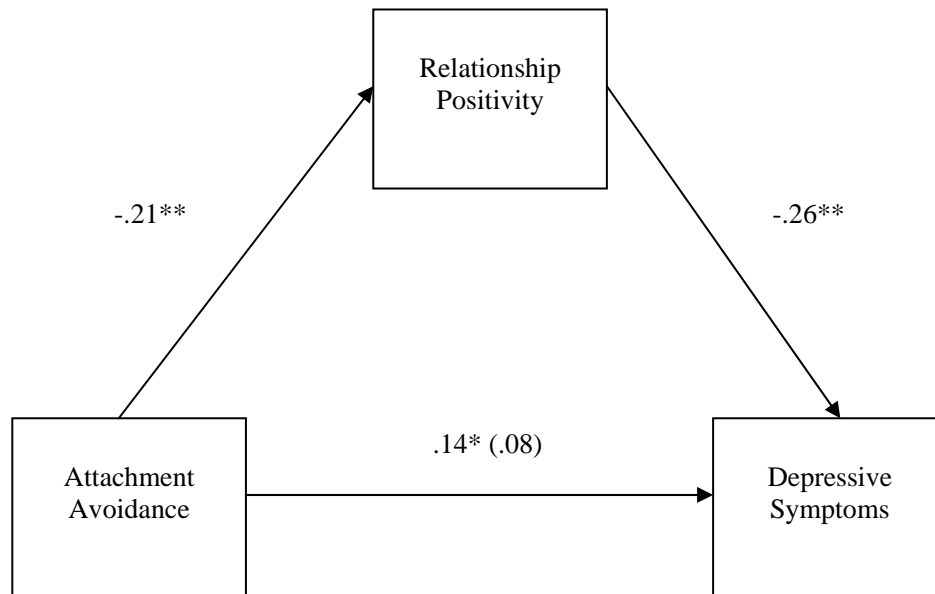


Figure 14: Mediation of the Avoidance-Depression Link by Relationship Positivity: Mexico

Note: The beta in parentheses is the relation between attachment avoidance and depressive symptoms, controlling for relationship positivity. * $p < .05$, ** $p < .01$

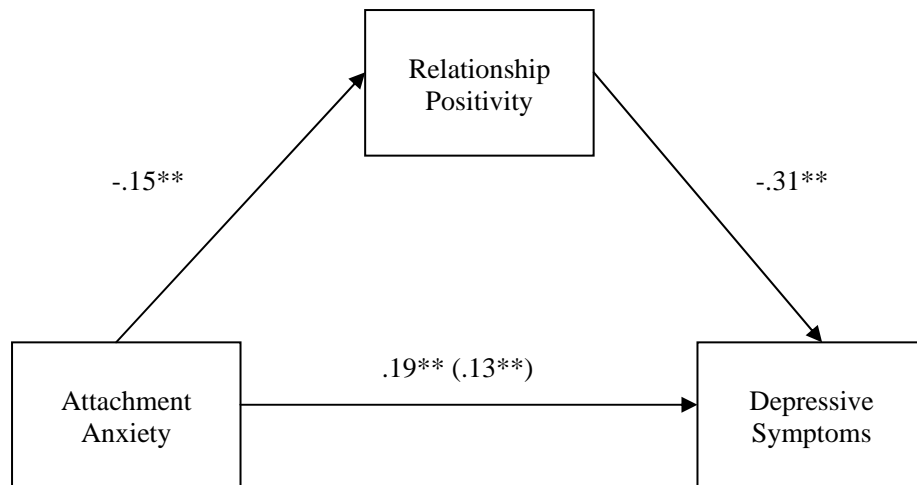


Figure 15: Mediation of the Anxiety-Depression Link by Relationship Positivity: Mexico

Note: The beta in parentheses is the relation between attachment avoidance and depressive symptoms, controlling for relationship positivity. * $p < .05$, ** $p < .01$

APPENDIX B

ENGLISH VERSIONS OF THE QUESTIONNAIRES

Investment Model Scales (Rusbult, 1980)

Commitment to My Dating Relationship

1) For how much longer do you want your relationship to last? (please circle a number)

0	1	2	3	4	5	6	7	8
A Month Or Less		Six Months			Twelve Months		Five Years	Ten Years Or More

2) Do you feel committed to maintaining your relationship with your partner? (circle a number)

0	1	2	3	4	5	6	7	8
Not At All								Completely

3) Do you feel "attached" or "tied" to your current relationship?

0	1	2	3	4	5	6	7	8
Not At All								Completely

4) How likely is it that you will end your relationship in the near future?

0	1	2	3	4	5	6	7	8
Not At All	Likely							Extremely

5) Do you ever have fantasies about what life might be like if you weren't dating your partner (i.e., how often do you wish that you weren't involved)?

0	1	2	3	4	5	6	7	8
Never Have								Have Often

Satisfaction With My Dating Relationship

1) Do you feel satisfied with your relationship?

0	1	2	3	4	5	6	7	8
Not At All								Completely

2) How much do you love your partner?

0 1 2 3 4 5 6 7 8
Not At All Completely

3) How does your relationship compare to other people's relationships?

0 1 2 3 4 5 6 7 8
Much Worse Much Better

4) How does your relationship compare to your ideal relationship?

0 1 2 3 4 5 6 7 8
Far From Ideal Close To
Ideal

Alternatives to the Current Relationship

1) How attractive are the people other than your partner with whom you could become involved?

0 1 2 3 4 5 6 7 8
Alternatives Not Alternatives
Are At All Appealing Extremely
Appealing

2) If you weren't dating your current partner, would you find another appealing person to date?

0 1 2 3 4 5 6 7 8
Hard to Find Easy to Find
Another Partner Another
Partner

3) How would you feel about not being in a dating relationship (spending time socially with friends and family instead)?

0 1 2 3 4 5 6 7 8
I'd Feel Terrible I'd Feel Fine

4) How do your alternatives (dating another, spending time alone, etc.) compare to your relationship with your partner?

0 1 2 3 4 5 6 7 8
 Alternatives Are Much Worse Alternatives Are Much Better

Investments in Relationship

1) Have you put things into your relationship that you would in some sense lose if the relationship were to end (e.g., time spent together, secrets disclosed, memories you share)?

0 1 2 3 4 5 6 7 8
 Put Nothing Into Relationship Put Everything Into Relationship

2) Are there things that are now "tied" to your relationship that you would in some sense lose if the relationship was to end (e.g., shared friends, material possessions [furniture, car], housing)?

0 1 2 3 4 5 6 7 8
 Nothing Tied To Relationship Everything Tied To Relationship

3) Are there special activities associated with your relationship that you would in some sense lose (or they'd be more difficult) if the relationship were to end (e.g., recreational activities, job)?

0 1 2 3 4 5 6 7 8
 No Activities Many Activities

4) How much have you got invested in your relationship – things that you've put into it, things that are tied to it, activities that are connected to it, etc.?

0 1 2 3 4 5 6 7 8
 Nothing A Great Deal

Hendrick Satisfaction Scale (1988)

Please answer the next set of questions according to how you feel in your relationship.
Use the following scale:

1	2	3	4	5	6	7
Not at All/ Poorly			A Great Deal/ Extremely Good			

1. How well does your partner meet your needs?
2. In general, how satisfied are you with your relationship?
3. How good is your relationship, compared to most?
4. How often do you wish you had not gotten into this relationship?
5. To what extent has your relationship met your original expectations?
6. How much do you love your partner?
7. How many problems are there in your relationship?

Brennan et al.'s (1998) Experiences in Close Relationships

The following statements concern how you feel in romantic relationships. We are interested in how you **generally** experience relationships, *not* just in what is happening in your current relationship. Respond to each statement by indicating how much you agree or disagree with it. Darken in the appropriate bubble using the following rating scale.

Disagree Strongly				Neutral /Mixed				Agree Strongly
1	2	3	4	5	6	7		

1. I prefer not to show partners how I feel deep down.
2. I worry about being abandoned.
3. I am very comfortable being close to romantic partners.
4. I worry a lot about my relationships.
5. Just when partners start to get close to me, I find myself pulling away
6. I worry that romantic partners won't care about me as much as I care about them.
7. I get uncomfortable when romantic partners want to be very close.
8. I worry a fair amount about losing partners
9. I don't feel comfortable opening up to romantic partners.
10. I often wish that partners' feelings for me were as strong as my feelings for them.
11. I want to get close to partners, but I keep pulling back.
12. I often want to merge completely with romantic partners and this sometimes scares them away.
13. I am nervous when partners get too close to me.
14. I worry about being alone.
15. I feel comfortable sharing my private thoughts and feelings with partners.
16. My desire to be very close sometimes scares people away.
17. I try to avoid getting too close to partners
18. I need a lot of reassurance that I am loved by partners.
19. I find it relatively easy to get close to partners.
20. Sometimes I feel that I force my partners to show more feeling, more commitment.
21. I find it difficult to allow myself to depend on romantic partners.
22. I do not often worry about being abandoned.
23. I prefer not to be too close to romantic partners.
24. If I can't get romantic partners to show interest in me, I get upset or angry.
25. I tell romantic partners just about everything.
26. I find that romantic partners don't want to get as close as I would like.
27. I usually discuss my problems and concerns with romantic partners.
28. When I'm not involved in a relationship, I feel some-what anxious and insecure.

29. I feel comfortable depending on romantic partners.
30. I get frustrated when romantic partners are not around as much as I would like.
31. I don't mind asking romantic partners for comfort, advice or help.
32. I get frustrated if romantic partners are not available when I need them.
33. It helps to turn to my romantic partners in times of need.
34. When romantic partners disapprove of me, I feel really bad about myself.
35. I turn to partners for many things, including comfort and reassurance.
36. I resent it when partners spend time away from me.

C.E.S.D. Depression Measure (1977, Radloff)

Below is a list of the ways you might have felt or behaved during the past week. Please indicate how often you have felt this way during the past week. Darken in the appropriate bubble using the scale below.

- 1 = Rarely or None of the Time (Less than 1 Day)
- 2 = Some or a Little of the Time (1-2 Days)
- 3 = Occasionally or a Moderate Amount of Time (3-4 Days)
- 4 = Most or All of the Time (5-7 Days)

During the past week:

1. I was bothered by things that usually don't bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues even with the help from my family or friends.
4. I felt that I was just as good as other people.
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort.
8. I felt hopeful about the future.
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.
19. I felt that people disliked me.
20. I could not get "going."

Individualism-Collectivism Scale (Triandis & Gelfand, 1998)

1	2	3	4	5
disagree strongly	disagree a little	neither agree nor disagree	agree a little	agree strongly

Please indicate the extent to which you agree or disagree with the following statements. If you strongly disagree with a statement, darken the “1” bubble; if you strongly agree with a statement, darken the “5” bubble. If you are unsure or you don’t think the statement applies to you, darken the “3” bubble

1. I’d rather depend on myself than others.
2. I rely on myself most of the time; I rarely rely on others.
3. I often “do my own thing.”
4. My personal identity, independent of others, is very important to me.
5. It is important that I do my job better than others.
6. Winning is everything.
7. Competition is the law of nature.
8. When another person does better than I do, I get tense and aroused.
9. If a coworker gets a prize, I would feel proud.
10. The well-being of my coworkers is important to me.
11. To me, pleasure is spending time with others.
12. I feel good when I cooperate with others.
13. Parents and children must stay together as much as possible.
14. It is my duty to take care of my family even when I have to sacrifice what I want.
15. Family members should stick together no matter what sacrifices are required.
16. It is important to me that I respect the decisions made by my groups.

4) De qué manera sus alternativas (salir con alguien más, emplear tiempo solo, etc.) se compara a la relación con su pareja?

0	1	2	3	4	5	6	7	8
Las alternativas Son mucho peores						Las alternativas son mucho mejores		

Involucramiento en la Relación

1) Has invertido cosas en tu relación que en cierto sentido se perderían si la relación terminara? (ej. Tiempo empleado juntos, secretos revelados, recuerdos compartidos)?

0	1	2	3	4	5	6	7	8
No he invertido en la relación							He invertido en la relación	

2) Hay cosas que se encuentran atadas a su relación que en cierto sentido se perderían si la relación terminara (ej. Amigos en común, posesiones materiales {muebles, carros, vivienda})

0	1	2	3	4	5	6	7	8
Nada atado a La relación							Todo atado a la relación	

3) Hay actividades especiales asociadas con su relación que en cierto sentido perdería (o sería mucho más difícil llevarlas a cabo) si la relación terminara (ej. Actividades recreativas, trabajo)?

0	1	2	3	4	5	6	7	8
Ninguna actividad						Muchas actividades		

4) Cuánto ha invertido en su relación –cosas que ha puesto dentro de ella, cosas que están atadas a ella, actividades que están conectadas a ella, etc.?

0	1	2	3	4	5	6	7	8
Nada							Mucho	

Brennan et al.'s (1998) Experiences in Close Relationships

Las siguientes afirmaciones se refieren a cómo se siente usted en las relaciones románticas. Estamos interesados en conocer cómo se siente generalmente en sus relaciones, y no únicamente en lo que está sucediendo en su relación actual. Responda a cada afirmación indicando qué tan de acuerdo o desacuerdo está con cada una de ellas. Marque la respuesta apropiada utilizando la siguiente escala.

Totalmente En desacuerdo			Neutro		Fuertemente en acuerdo	
1	2	3	4	5	6	7
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						
21.						
22.						
23.						

24. Si no logro que mis parejas románticas se interesen en mi, me altero o enojo.
25. A mis parejas románticas les platico de todo
26. Encuentro que mis parejas románticas no quieren estar tan cerca de mi como yo lo quiero con ellas.
27. Usualmente discuto mis problemas y preocupaciones con mis parejas románticas
28. Cuando no estoy involucrado en una relación me siento algo ansioso e inseguro
29. Me siento cómodo dependiendo de mis parejas románticas.
30. Me frustro cuando mis parejas románticas no están alrededor mío como me gustaría
31. No me preocupa pedirles a mis parejas comodidad, ayuda o consejo.
32. Me frustro si mis parejas románticas no están disponibles cuando los necesito
33. Ayuda recurrir a mis parejas románticas en tiempos de necesidad
34. Cuando mis parejas románticas me desaprueban me siento realmente mal acerca de mi mismo
35. Recorro a mis parejas románticas para muchas cosas, incluyendo comodidad y tranquilidad
36. Resiento cuando mis parejas románticas ocupen su tiempo lejos de mi

Hendrick Satisfaction Scale (1988)

Por favor responda la próxima serie de preguntas de acuerdo a cómo se siente en su relación. Use la siguiente escala.

1	2	3	4	5	6	7
No muy bien/ Pobremente			Muchísimo/ Extremadamente bien			

1. Qué tan bien su pareja conoce sus necesidades?
2. En general, qué tan satisfecho está usted con su relación?
3. Qué tan buena es su relación, en comparación con la mayoría?
4. Qué tan frecuente usted desea no haberse metido en esta relación?
5. En qué grado su relación ha cumplido con sus expectativas originales?
6. Cuánto ama a su pareja?
7. Cuántos problemas hay en su relación?

C.E.S.D. Depression Measure (1977, Radloff)

Abajo hay una lista de las formas en las que usted, puede haberse sentido o conducido durante la semana pasada. Por favor indique qué tan frecuente se ha sentido de esta manera durante la semana pasada . Marque el número apropiado usando la escala que se indica:

- 1 = Raramente o ninguna vez en el tiempo (Menos que 1 día)
- 2 = Algo o un poco en el tiempo (1-2 Días)
- 3 = Ocasionalmente o en una moderada cantidad de tiempo (3-4 Días)
- 4 = La mayor parte o todo el tiempo (5-7 Días)

Durante la semana pasada:

1. Estaba preocupado por cosas que usualmente no me molestan
2. No me sentí con hambre, mi apetito fue pobre.
3. Sentí, que no podría librarme de los problemas aún con la ayuda de mi familia o amigos.
4. Sentí que era tan bueno como otra gente.
5. Tuve problema manteniendo mi mente en lo que estaba haciendo
6. Me sentí deprimido.
7. Sentí que todo lo que hice era un esfuerzo.
8. Sentí esperanza acerca del futuro
9. Pensé que mi vida había sido un fracaso
10. Me sentí asustado
11. Mi sueño no fue descansado
12. Estaba feliz.
13. Hablé menos de lo usual.
14. Me sentí solo.
15. La gente no fue amistosa.
16. Disfruté la vida
17. Tuve periodos de llanto
18. Me sentí triste
19. Sentí que le disgustaba a la gente
20. No podía “seguir”

Individualism-Collectivism Scale (Triandis & Gelfand, 1998)

1	2	3	4	5
totalmente en desacuerdo		Neutro		totalmente en acuerdo

1. Preferiría depender de mí mismo que de otros.
2. Confío en mí mismo la mayor parte del tiempo; raramente confío en otros.
3. Frecuentemente hago lo que considero
4. Mi identidad personal, independiente de los otros, es muy importante para mí.
5. Es importante que haga mi trabajo mejor que los otros.
6. Ganar lo es todo.
7. Competir es la ley de la naturaleza.
8. Cuando una persona lo hace mejor que yo, me siento tenso y alterado.
9. Si un compañero de trabajo ganara un premio, me sentiría orgulloso.
10. El bienestar de mis compañeros de trabajo es importante para mí.
11. Para mí es placentero emplear tiempo con otras personas.
12. Me siento bien cuando coopero con otros.
13. Padres y niños deben estar juntos tanto como sea posible.
14. Es mi deber cuidar a mi familia aún cuando tengo que sacrificar lo que quiero.
15. Los miembros de la familia deberían tolerarse juntos sin importar los sacrificios que tengan que hacer.
16. Es importante para mí respetar las decisiones hechas por mis grupos de referencia.

APPENDIX D

CHINESE (SIMPLIFIED) VERSIONS OF THE QUESTIONNAIRES

Investment Model Scales (Rusbult, 1980)

- | | 一個月或以下 | 六個月 | 十二個月 | 五年 | 十年或以上 | | |
|--|--------|-----|------|----|---------|-------|------|
| 1. 你希望這段關係能夠維持多幾多日子? | ① | ② | ③ | ④ | ⑤ ⑥ ⑦ ⑧ | | |
| 2. 你覺得自己全心奉獻去維持你和你愛侶的關係嗎? | 完全沒有 | ① | ② | ③ | ④ | ⑤ ⑥ ⑦ | 完全有 |
| 3. 你有否覺得連繫 / 融入於這段關係中? | 完全沒有 | ① | ② | ③ | ④ | ⑤ ⑥ ⑦ | 完全有 |
| 4. 你有多大機會在短期內結束這段關係? | 完全沒有機會 | ① | ② | ③ | ④ | ⑤ ⑥ ⑦ | 極大機會 |
| 5. 你有否幻想過, 若你沒有和現在的愛侶拍拖你的生活會怎樣?
(即是你有多經常希望當初沒有牽涉入這段關係之中?) | 從來沒有 | ① | ② | ③ | ④ | ⑤ ⑥ ⑦ | 經常有 |

對愛情關係的滿意程度 (IMS_S)

1.你對這段關係感到滿意嗎？

一點也不滿意									完全滿意
①	②	③	④	⑤	⑥	⑦	⑧		

2.你有多愛你的愛侶？

一點也不愛									完全徹底地愛
①	②	③	④	⑤	⑥	⑦	⑧		

3.相比其他人你覺得你們的關係如何？

差很多									好好多
①	②	③	④	⑤	⑥	⑦	⑧		

4.你覺得你們的關係和你理想中的關係相比有多大差距？

和理想差很遠									和理想很接近
①	②	③	④	⑤	⑥	⑦	⑧		

現時情侶關係以外的選擇

1.除你現時的愛侶外，其他可以成為你愛的人對你有多大吸引力？

其他人完全沒有吸引力									其他人有極大吸引力
①	②	③	④	⑤	⑥	⑦	⑧		

	難以 找另 一個 伴侶									易於 找另 一個 伴侶
2.假如你沒有和你 現時的伴侶一起, 你覺得你會仍生活 得很好嗎? 你會否 找到另一個具吸引 力的人約會嗎?	①	②	③	④	⑤	⑥	⑦	⑧		

	我覺 得這 是可 怕的									我覺 得這 是很 好的
3.如果你沒有拍拖, 你會覺得怎樣?把 拍拖的時間花在和 朋友及家人相處, 你會覺得怎樣?	①	②	③	④	⑤	⑥	⑦	⑧		

	其他 選擇 差很 多									其他 選擇 好好 多
4.和你的愛情關係 相比,你覺得你其 他的選擇(例如:和 其他人約會,獨處.. 等)怎樣?	①	②	③	④	⑤	⑥	⑦	⑧		

在愛情關係裡的投資

	沒有 放任 何東 西入 這段 關係									放了 所有 東西 入這 段關 係
1.你有沒有投放一些當	①	②	③	④	⑤	⑥	⑦	⑧		

你們分手時會感到因失去而有點惋惜的東西在你們的關係之中呢？
(例如：一起的時間、互相透露的秘密、分享的回憶)？

沒有任何東西

所有東

2. 有沒有一些東西是和你們的關係息息相關的，而當你們分手時你就會失去這些東西 (例如：一同認識的朋友，物質財產[私家車]，房屋)？

① ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

沒有任何活動

很多活動

3. 有沒有一些和你們的關係息息相關的特別活動，而當你們分手時你就會失去(或難於)參加些活動？(例如：消遣活動，工作)

① ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

沒有

非常多

4. 你共投資了多少入這段關係裡呢？－ 例如你已經投放入這段關係的東西、和你們關係不可分割的東西、和你們關係有聯繫的活動等。

① ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

Hendrick Satisfaction Scale (1988)

請根據你對你們這段關係的感覺來回答下列問題。請用以下的比例尺。

	完全 沒有/ 非常 差						經常 有/ 非常 好
1.你的伴侶有多滿足你的需要?	①	②	③	④	⑤	⑥	⑦
2.總括來講,你有多滿意這段關係?	①	②	③	④	⑤	⑥	⑦
3.總括來講,你有多滿意這段關係?	①	②	③	④	⑤	⑥	⑦
4.你有多經常希望自己沒有開始這段關係?	①	②	③	④	⑤	⑥	⑦
5.你們的關係有多達到你原來的期望?	①	②	③	④	⑤	⑥	⑦
6.你有多愛你的伴侶?	①	②	③	④	⑤	⑥	⑦
7.你們的關係存在著幾多問題?	①	②	③	④	⑤	⑥	⑦

Brennan et al.'s (1998) Experiences in Close Relationships

	Disagr strongl		Neutra Mixed			Agree strongl	
1. 我寧願不向我的伴侶顯示我心底的感受。	①	②	③	④	⑤	⑥	⑦
2. 我擔心被拋棄。	①	②	③	④	⑤	⑥	⑦
3. 和我的伴侶親近，使我非常舒服。	①	②	③	④	⑤	⑥	⑦
4. 我很擔心我和我伴侶的關係。	①	②	③	④	⑤	⑥	⑦
5. 每當伴侶開始親近我時，我發覺自己會退縮和抽離。	①	②	③	④	⑤	⑥	⑦
6. 我擔心我的伴侶不會像我關心他 / 她們般關心我。	①	②	③	④	⑤	⑥	⑦
7. 當我的伴侶想親近我時，我會覺得很不舒服自在。	①	②	③	④	⑤	⑥	⑦
	Disagr strongl		Neutra Mixed			Agree strongl	
8. 我有些擔心會失去我的伴侶。	①	②	③	④	⑤	⑥	⑦
9. 向我的伴侶開放 / 開敞我自己，我會覺得不自在。	①	②	③	④	⑤	⑥	⑦
10. 我常常希望我伴侶對我的感覺有我對他 / 她們那麼強烈。	①	②	③	④	⑤	⑥	⑦
11. 我想親近我的伴侶，可是我常常退縮。	①	②	③	④	⑤	⑥	⑦
12. 我常常想與我的伴侶融為一體，	①	②	③	④	⑤	⑥	⑦

可是這有時會把他 / 她們嚇退。

13. 當我的伴侶太親近我的時候, 我
變得

情緒不安和神經過敏的。

① ② ③ ④ ⑤ ⑥ ⑦

14. 我擔心自己孤獨一個。

① ② ③ ④ ⑤ ⑥ ⑦

15. 與我的伴侶分享我個人的內心
想法和感受, 我覺得舒服自
在。

① ② ③ ④ ⑤ ⑥ ⑦

16. 我想與人非常親近的慾望有時
會嚇怕別人。

① ② ③ ④ ⑤ ⑥ ⑦

17. 我嘗試避免與我的伴侶太親
近。

① ② ③ ④ ⑤ ⑥ ⑦

18. 我需要伴侶大量的保證他 / 她
們愛我。

① ② ③ ④ ⑤ ⑥ ⑦

19. 我覺得我相對容易與我的伴侶
親近。

① ② ③ ④ ⑤ ⑥ ⑦

20. 有時我覺得我強迫我的伴侶去
表達多些的感受和承諾。

① ② ③ ④ ⑤ ⑥ ⑦

21. 我發覺很難去容許自己去依賴 /
依靠我的伴侶。

① ② ③ ④ ⑤ ⑥ ⑦

22. 我並不經常擔心被拋棄。

① ② ③ ④ ⑤ ⑥ ⑦

23. 我寧願選擇不與我的伴侶太親密 /
親近。

① ② ③ ④ ⑤ ⑥ ⑦

24. 假如我無法令我的伴侶對我產生興趣, 我會變得煩惱或憤怒。
- ① ② ③ ④ ⑤ ⑥ ⑦
25. 我會把一切事情告訴我的伴侶。
- Disagr strongl Neutra Mixed Agree strongl
- ① ② ③ ④ ⑤ ⑥ ⑦
26. 我發覺我的伴侶並不想要像我希望與他 / 她們那般親近。
- ① ② ③ ④ ⑤ ⑥ ⑦
27. 我多數會與我的伴侶談論我的問題和憂慮的事。
- ① ② ③ ④ ⑤ ⑥ ⑦
28. 當我沒有談戀愛的時候, 我感到有點焦慮和無保障。
- ① ② ③ ④ ⑤ ⑥ ⑦
29. 我覺得依靠我的伴侶很舒服自在。
- ① ② ③ ④ ⑤ ⑥ ⑦
30. 當我的伴侶並不像我想要那麼多般在我身邊, 我感到灰心受挫。
- ① ② ③ ④ ⑤ ⑥ ⑦
31. 我不介意要求我的伴侶給予我安慰、意見或幫助。
- ① ② ③ ④ ⑤ ⑥ ⑦
32. 如果我的伴侶在我需要他 / 她們時不在我的身邊, 我感到灰心受挫。
- ① ② ③ ④ ⑤ ⑥ ⑦

33. 在我有需要的時候尋求我的伴侶的幫助是有用的。
- ① ② ③ ④ ⑤ ⑥ ⑦
34. 當我的伴侶不贊同我的時候, 我**真的**覺得自己很差勁。
- ① ② ③ ④ ⑤ ⑥ ⑦
35. 我有很多事都會向我的伴侶求助, 包括安慰和保證。
- ① ② ③ ④ ⑤ ⑥ ⑦
36. 當我的伴侶所用的時間不是花在我身上時, 我感到怨恨。
- ① ② ③ ④ ⑤ ⑥ ⑦

Sarason et al. (1983) Social Support Measure

請利用以下的七等量表，將適當的圓圈塗黑以回應各題。

- | | Not
At All | | | | | | Very
Much |
|-----------------------------------|-----------------------|---|---|---|---|---|----------------------|
| 1.當你感到壓力的時候，你有多能夠依靠你的伴侶去分散你的憂慮？ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 2.當你受到壓力的時候，你有多能夠依靠你的伴侶去使你感到更加輕鬆？ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| | Not
At All | | | | | | Very
Much |
| 3.你的伴侶有多能夠接受你，包括你的缺點優點？ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 4.你有多能夠依靠你的伴侶去關心你，不論你發生任何事情？ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 5.當你情緒低落的時候，你有多能夠依靠你的伴侶去幫助你感到好些？ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 6.當你感到非常難過時，你有多能夠依靠你的伴侶去安慰你？ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 7.總的說來，你對你從伴侶所得到的支持有多滿意？ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

C.E.S.D. Depression Measure (1977, Radloff)

以下是一列你可能在過去一個星期內感覺或表現的方法。請指出你在過去一個星期內有多常感覺到這方法。使用以下的刻度，填黑適當的空格。

1 = 很少或沒有時間(少於 1 日)

2 = 一些或甚少時間(1-2 日)

3 = 偶爾或適度的時間(3-4 日)

4 = 大部份或全部時間(5-7 日)

在過去一個星期:	少於 1 日	1-2 日	3-4 日	5-7 日
1. 我為通常不煩擾我的東西而煩惱。	①	②	③	④
2. 我不想進食; 我的胃口很差。	①	②	③	④
3. 我感覺即使得到家人或朋友的幫助, 我都 脫憂鬱。	①	②	③	④
4. 我感覺我跟其他人一樣好。	①	②	③	④
5. 我有困難把精神集中於我正在做的事。	①	②	③	④
6. 我感覺憂鬱。	①	②	③	④
7. 我感覺我做所有事都很費力。	①	②	③	④
8. 我對未來充滿希望。	①	②	③	④

9. 我認為我的生命是失敗。	①	②	③	④
10. 我感到害怕。	①	②	③	④
11. 我的睡眠不安寧。	①	②	③	④
12. 我快樂。	①	②	③	④
在過去一個星期:	少於 1日	1-2日	3-4日	5-7日
13. 我比平時少說話。	①	②	③	④
14. 我感到孤獨。	①	②	③	④
15. 人們不友善。	①	②	③	④
16. 我享受生命。	①	②	③	④
17. 我有時會哭。	①	②	③	④
18. 我感到悲哀。	①	②	③	④
19. 我感到人們不喜愛我。	①	②	③	④
20. 我不能得到進展。	①	②	③	④

Individualism-Collectivism Scale (Triandis & Gelfand, 1998)

這裡的特點可能或不可能適用於你。請塗黑句子旁邊的適當號碼，以顯示你對句子的同意程度。

	非常 不同 意	少許 不同 意	既不 同意 也不 否定	少許 同意	非常 同意
1 我寧願靠自己而不靠別人。	①	②	③	④	⑤
2 我通常倚賴自己; 我很少倚賴他人。	①	②	③	④	⑤
3 我通常做自己的事。	①	②	③	④	⑤
4 對我來說「我獨立於他人的個人身份」是非常重要的。	①	②	③	④	⑤
5 我的工作做得比別人好是重要的。	①	②	③	④	⑤
6 勝利就是一切。	①	②	③	④	⑤
7 競爭是自然的定律。	①	②	③	④	⑤
8 當另一個人比我做得好，我感到緊張和關注。	①	②	③	④	⑤
9 假如有同事得獎，我會感到自豪。	①	②	③	④	⑤
10 同事的安康對我來說是重要的。	①	②	③	④	⑤
11 對我來說，快樂是和別人一起消磨時間。	①	②	③	④	⑤
12 當我和別人合作，我感覺良好。	①	②	③	④	⑤
13 長和子女必須盡可能留在一起。	①	②	③	④	⑤

- | | | | | | |
|---------------------------|---|---|---|---|---|
| 14 即使要犧牲我想要的東西，照顧家庭是我的責任。 | ① | ② | ③ | ④ | ⑤ |
| 15 無論需要怎樣的犧牲，家庭成員應該緊靠在一起。 | ① | ② | ③ | ④ | ⑤ |
| 16 重我的團體作出的決定對我來說是重要的。 | ① | ② | ③ | ④ | ⑤ |

VITA

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Education

B.A. 2001. Psychology and French. Washington University in St. Louis, MO.
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Research Interests

Cultural Psychology, Culture and the Self, Culture and Cognition, Attachment Theory, Terror Management Theory.

Publications

-Friedman, M., Vaid, J. & Chen, H. C. (2006). Proverb preferences across cultures: Dialecticality or poeticality? *Psychonomic Bulletin and Review*, 13, 353-359.
-Rholes, W. S., Simpson, J. A. & Friedman, M. (2006). Avoidant attachment and the experience of parenting, *Personality and Social Psychology Bulletin*, 32, 275-285.
-Rholes, W. S., Paetzhold, R. L., & Friedman, M. (2006). Attachment style and satisfaction in close relationships. Chapter to appear in F. Rhodewaldt (Ed.) *Personality and Social Interaction*. Washington, D. C.: Psychology Press (in press).

Selected Talks

-Friedman, M. Religious Fundamentalism and Terror Management. (January 2006). Paper presented at the Society for Personality and Social Psychology (SPSP) Conference in Palm Springs, CA.
-Friedman, M. La Gestion de la Terreur et la Religion Fondamentaliste. (February, 2006). Paper presented (in French) at the Université de Paris 5 (René Descartes).

Grants, Honors, and Awards

2001, Graduated with College Honors, Washington University in St. Louis.
2003, Texas A&M Race and Ethnic Studies Graduate Student Mini-Grant.
2004, EAPSI Travel and Research Fellowship to Taiwan- National Science Foundation.
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