Attachment avoidance and the cultural fit hypothesis: A cross-cultural investigation

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Abstract

This study examined the impact of attachment avoidance on relationship outcomes. A "cultural fit" hypothesis, which states that individual differences in personality should be associated with relationship problems if they encourage patterns of behavior that are incongruent with cultural norms, was investigated. It was hypothesized that attachment avoidance, a style of relationship in which emotional distance and independence are emphasized, would be more strongly associated with relationship problems in more collectivist societies (Hong Kong and Mexico) than in a more individualist one (the United States), given the greater emphasis placed on closeness and harmony in relationships in collectivist cultures. As predicted, associations between avoidant attachment and relationship problems were stronger in Hong Kong and Mexico than in the United States.

Understanding when, how, and why major individual differences are associated with the perception, functioning, and outcomes of close relationships is a growing area of research in the field of interpersonal relationships. Most of the studies addressing these issues, however, have been conducted in the United States or other Western societies. Consequently, the role that cultural differences might play in the strength of the association between individual differences and relationship outcomes remains largely unknown. The goal of the present research is to begin filling this important gap in the literature. To do so, we examine ways in which culture and individual differences might interact to shape relationship satisfaction and other relationship outcomes. In particular, we test a "cultural fit" hypothesis, which states that individual differences should be more strongly correlated with relationship problems and relationship dissatisfaction if they encourage patterns of thought, behavior, or affect that are *incongruent* with a given cultural group's values, beliefs, and expectations about close relationships.

The present study focuses on individual differences in avoidant romantic attachment style in the cultures of Hong Kong, Mexico, and the United States. We propose that within each of these cultures, values, expectations, and norms encourage emotional closeness, interdependence, and harmony in close heterosexual relationships. We further propose that the value placed on closeness and harmony is greater in collectivist than in individualist cultures. Thus, we hypothesize that the avoidant attachment style, which encourages greater emotional distance and independence over interdependence, should be more strongly correlated with relationship dissatisfaction and other relationship problems in collectivist cultures (Mexico and Hong Kong in this study) than in an individualist one (the United States).

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In this section, we explain the basis of the cultural fit hypothesis in detail. We first review studies showing that levels of collectivism and individualism are different in Hong Kong, the United States, and Mexico. We next review differences between collectivist and individualist cultures in values and ideals relating to close relationships. We then describe attachment styles, focusing on the avoidant style, and discuss studies from the "person–culture fit" literature that indicate that culture–person mismatches are often associated with psychological discomfort.

Cultural collectivism and individualism in Hong Kong, Mexico, and the United States

The three cultures we sampled were selected because they vary in cultural levels of individualism versus collectivism. Studying individualism in 50 nations, Hofstede (2001) found that the United States was the most individualistic country, whereas Hong Kong was one of the least, ranking 37th. Mexico, which ranked 30th, was nearer the middle of the distribution. In a recent meta-analysis of social psychological research on individualism and collectivism, Oyserman, Coon, and Kemmelmeier (2002) found that the United States was more individualistic than Hong Kong and that Mexico fell between these countries. Several other studies have supported the claim that Hong Kong is more collectivist than the United States and most other Western cultures (e.g., Chinese Culture Connection, 1987; Hong, Morris, Chiu, & Benet-Martínez, 2000; Kashima et al., 2005; Triandis, Chen, & Chan, 1998; Wheeler, Reis, & Bond, 1989). Although research on Mexico is comparatively sparse, several investigators have concluded that Mexico is more collectivistic than the United States (e.g., Diaz-Guerrero, 1975, 1977; Diaz-Loving, 2005; Diaz-Loving & Draguns, 1999; Shkodriani & Gibbons, 1995).

Prescriptive norms in close relationships in collectivist and individualist cultures

Researchers have also examined differences in the values and ideals that define romantic relationships, within both Chinese and Western cultural contexts (e.g., Goodwin, 1999; Rapson & Hatfield, 2005). A central theme in Chinese culture is the importance placed on relational closeness and harmony. This societal imperative has been traced to Confucianism (Bond & Hwang, 1986; Hwang, 2000; Yum, 1988), which maintains that human relationships are the basis of society (Yum, 1988). A key to understanding relationships within Chinese culture is the sense of interdependency between relationship partners and their strong "other-orientation." Indeed, attending to and responding to the needs and wishes of others are the foundation upon which viable relationships are based in Chinese culture (Goodwin & Tang, 1996).

Accordingly, researchers have argued that qualities that promote closeness and harmony should be especially attractive to potential relationship partners in the Chinese culture (Bond & Hwang, 1986). Consistent with this argument, several studies have documented the importance of closeness in Chinese relationships. For example, maintaining harmony in the marital relationship is viewed as very important among married couples in urban China (Pimentel, 2000). Moreover, in Hong Kong, cultural collectivism is negatively related to a preference for autonomy or independence in relationships (Hui & Villareal, 1989). A textual analysis of love songs has found that Chinese songs emphasize devotion, commitment, and loyalty more than American songs do (Rothbaum & Tsang, 1998). Goodwin (1999) suggests that given the greater need for affiliation and nurturance in persons who have a more collectivist orientation, meeting these needs in close relationships should be more important among the Chinese than among their more individualist counterparts in the West.

Consistent with Goodwin's (1999) analysis, Rothbaum, Pott, Azuma, Miyake, and Weisz (2000) suggest that romantic relationships in some East Asian cultures are based on the concept of assurance or unconditional loyalty between partners based on compassion, friendship, and the elimination of boundaries. Assurance derives from a cultural incentive structure that reinforces loyalty

and commitment between partners and leads partners to value companionable forms of love that involve close friendships and enduring commitment. Compared with Western cultures, relationships in East Asian cultures are based more on commitment and loyalty and less on romantic love. Emphasis is placed on the pragmatics of relationships that foster harmony, cohesion, intolerance for conflict, and a cherishing of the relationship.

Several theoretical models also imply that closeness and harmony in relationships are important values within Mexican culture (Diaz-Guerrero, 1975; Diaz-Loving, 2005). Given the broad cultural imperative in Mexican society to maintain harmony with others, styles of interpersonal interaction that promote harmony, interdependence, and emotional stability are especially valued in Mexico (Diaz-Loving, 2005). Diaz-Guerrero (1975) notes that Mexican culture places considerable emphasis on behaviors that facilitate physical, emotional, or social closeness and on values that encourage warm and nonconfrontational interpersonal interactions. In sum, research on relationships in collectivist cultures suggests that harmony and closeness are highly valued in Hong Kong and Mexico and that tolerance for relationships that do not meet these values may be lower in these cultures than in the United States (Goodwin, 1999).

Attachment orientations

According to attachment theory (Bowlby, 1969, 1973, 1980), human beings are endowed with an innate attachment system that motivates infants, children, and adults to seek security and comfort from their attachment figures during stressful times. In infancy and childhood (when individual differences in attachment styles are being formed), principal caregivers may or may not provide forms of care that engender feelings of security and safety. If individuals' needs for safety and security are sufficiently met when they are distressed, they tend to develop a secure attachment orientation (Ainsworth, Blehar, Waters, & Wall, 1978). If, however, individuals have caregivers who either reject their bids for closeness and comfort when

they are distressed or provide inconsistent or unpredictable care, such persons expect that attachment figures cannot be counted on to be dependable, emotionally available, and caring.

Adult romantic attachment styles are measured along two orthogonal dimensions (Brennan, Clark, & Shaver, 1998; Simpson, Rholes, & Phillips, 1996): avoidance and anxiety. Persons who are highly avoidant have learned to avoid rejection from attachment figures by maintaining psychological and emotional distance and independence. Those who are highly anxious believe that their attachment figures may abandon them either physically or emotionally. In order to get their needs for emotional support and care met, highly anxious people exaggerate sources of distress in their lives and their need for help from others, and they cling to their partners to stave off abandonment.

Mikulincer and Shaver (2003, 2007) have reviewed the many ways in which highly avoidant persons maintain emotional distance from their partners. The picture that emerges for avoidant adults is one of limited closeness and intimacy, relationship disharmony, and relationship dissatisfaction. More avoidant people are less likely to seek emotional support from their partners when they are upset and are more reluctant to provide care when their partners truly need it (Simpson, Rholes, & Nelligan, 1992), limiting opportunities to build deeper intimacy and closeness. More avoidant people also curtail intimacy by avoiding self-disclosure and turning away from those who disclose to them (Bartholomew & Horowitz, 1991; Bradford, Feeney, & Campbell, 2002), and they know less about their romantic partners' emotional lives and are less interested in learning more about their partners' lives (Rholes, Simpson, Tran, Martin, & Friedman, 2007).

Highly avoidant people also are less empathic and less altruistic (Mikulincer, Shaver, Gillath, & Nitzberg, 2005), and they handle conflict in ways that tend to generate disharmony. When distressed, more avoidant individuals tend to become angry with their partners (Rholes, Simpson, & Oriña, 1999). Finally, they are generally dissatisfied with their relationships (Mikulincer, Florian, Cowan, &

Cowan, 2002; Simpson, 1990), and their romantic partners tend to be more dissatisfied with them in return (Collins, Cooper, Albino, & Allard, 2002; Davila, Bradbury, & Fincham, 1998; Simpson, 1990).

Although attachment anxiety is not the focus of the present study, more anxiously attached adults chronically worry about being abandoned, and they are concerned that their persistent needs for care and affection will remain unfulfilled. Highly anxious individuals view their partners as largely unsupportive (Rholes, Simpson, Campbell, & Grich, 2001), they perceive greater conflict in their relationships than their partners do (Campbell, Simpson, Boldry, & Kashy, 2005), and they manage conflict more poorly (Pistole, 2003; Simpson et al., 1996). Highly anxious individuals also tend to be less altruistic (Mikulincer et al., 2005), focusing on meeting their own emotional needs in relationships over providing for the emotional needs of their partners (Rholes, Peatzold, & Friedman, 2008). Although they are similar to highly avoidant persons in certain ways, highly anxious persons differ fundamentally in terms of their desire to form close, intimate relationships and their hypervigilance toward and concerns about being abandoned by their romantic partners.

Avoidance is the variable of primary concern in the present investigation. The emphasis that more avoidant people place on psychological distance and their tendency to eschew interdependence with their partners suggests that their behavior may be highly incongruent with the prescriptive norms of collectivist cultures.

Person–culture fit

Studies of person–culture fit have revealed that perceived or actual differences between an individual and the culture in which he or she is situated are related to psychological discomfort. The concept of person–culture fit has been widely investigated by organizational psychologists, who have repeatedly found that less concordance between the characteristics of an individual and his or her workplace culture is associated with poorer psychological outcomes (e.g., decreased job satisfaction) and more negative perceptions of the environment (e.g., decreased organizational commitment, increased intentions to quit; Kristof, 1996; Kristof-Brown, Zimmerman, & Johnson, 2005; O'Reilly, Chatman, & Caldwell, 1991).

More pertinent to the present investigation are studies examining lack of fit between individual and cultural characteristics. Much of this research has focused on how sojourners fit into their host cultures. Some has addressed "cultural distance," which is the subjective difference between one's home and one's host culture. Perceived cultural distance predicts greater difficulties in psychological adjustment, including increased tension, depression, and anger (Ward & Searle, 1991) as well as lower life satisfaction, more physical health problems, and somewhat greater depression (Chirkov, Lynch, & Niwa, 2005). Similar effects have been found using other operationalizations of cultural fit. For example, for American sojourners in Singapore, the discrepancy between individual levels of extraversion and societal norms for extraverted behavior predict greater depressive symptoms (Ward & Chang, 1997).

Comparable effects also have been found in studies investigating the impact of individual differences in independent versus interdependent self-construal. Among Asian visitors to the United States, for example, higher levels of independent self-construal (congruent with U.S. culture) predict better psychological adjustment to life in the United States (Oguri & Gudykunst, 2002). Similarly, a study of Asian graduate students beginning their studies in the United States has revealed that higher interdependent self-construal (incongruent with U.S. culture) is related to greater perceived stress (Cross, 1995). A cross-cultural study conducted in Australia and East Asia examined the concordance of individual and societal characteristics in a work context (Parkes, Bochner, & Schneider, 2001) and found interactions between cultural context and self-construal, such that workers who had more interdependent self-construals displayed especially strong commitment to their jobs in Asian organizations compared with Australian ones. A similar interaction indicated that more

interdependent individuals also had longer tenure in Asian, but not in Australian, organizations. There are, therefore, two types of cultural fit. One concerns the fit between one's culture of origin and a separate host culture, and the other concerns the fit between an individual's personality characteristics and his or her culture of origin (Ward & Chang, 1997). The present study investigates the latter type, namely, the fit between attachment styles and prescriptive cultural norms.

In sum, considerable research suggests that incongruence between individual characteristics and the characteristics of one's culture or environment can generate negative outcomes. These effects are relatively robust, emerging across different definitions of culture (e.g., workplace, societal) and across different assessments of fit.

Hypotheses

On the basis of the theory and research described above, we hypothesized that avoidance would be positively correlated with relationship dissatisfaction and other indicators of relationship problems within each of the cultures investigated. This hypothesis is grounded on the idea that (a) many individuals within each of the cultures investigated in this study value closeness and harmony in relationships, at least to some degree, and (b) greater attachment avoidance should result in behaviors that make the attainment of these relationship outcomes more difficult. It is important to emphasize that we are *not* hypothesizing that avoidance itself differs across cultures. We are merely suggesting that avoidant attachment should have the same patterns of associations with outcomes measures in Hong Kong, Mexico, and the United States. We expect, however, that the *consequences* of avoidant behavior for relationships will be context sensitive. More specifically, greater avoidance should be more strongly related to relationship problems in cultures in which avoidant behavior is more inconsistent with prescriptive norms regarding relationships. Accordingly, the central hypothesis of this study is that the association between avoidance and relationship dissatisfaction along with other markers

of relationship difficulties (e.g., greater conflict, lower investment, and lower perceived partner support) will be more pronounced in the more collectivist cultures (Hong Kong and Mexico) than in the United States. This hypothesis is based on the research reviewed above, which indicates that closeness and harmony are more strongly valued in more collectivist cultures.

Unrelated to the cultural fit hypothesis, previous cross-cultural research has also shown that mean levels of avoidant and anxious romantic attachment orientations tend to be higher in Pacific Rim cultures than in Western cultures (Schmitt et al., 2004; Sprecher et al., 1994). We expected to replicate these findings.

We did not generate hypotheses concerning cultural differences in associations between anxious attachment and relationship outcomes. Highly anxious individuals have a strong need and desire for greater closeness and intimacy. As a result, they might appear to fit well into collectivist cultures. Their desire for greater intimacy, however, is based in part on their fear that relationship partners will leave them. Attachment-related anxiety manifests itself in lower levels of trust. More anxious individuals' obsessive quest for greater closeness and security leads them to feel and display greater negative affect (Simpson, 1990) and to ruminate about worst case relationship scenarios (Mikulincer & Florian, 1998; Mikulincer & Orbach, 1995). More anxious people are quick to perceive trust violations (Mikulincer, 1998), and their relationships are characterized by less harmony and greater conflict (Rholes et al., 2008; Simpson et al., 1996). Thus, although their desire to seek greater closeness is consistent with the values and norms of more collectivistic cultures, the self-serving nature of their motives coupled with the distrust that underlies their quest for greater closeness ought to conflict with the expectations and norms of more collectivist cultures. Because anxiety is multifaceted and has features that could fit well into a collectivist cultural context, but also has features that could be in conflict with collectivist cultural contexts, we did not advance hypotheses about anxiety and cultural fit.

Method

Participants

Participants in each of the three cultures (Hong Kong, Mexico, and the United States) were university students. Mexican and U.S. participants took part in partial fulfillment of a course requirement. Most Hong Kong participants also participated to partially fulfill a course requirement, though some received $50 HK (about $2.50 in U.S. dollars).

All participants were required to be currently involved in a romantic relationship that had existed for at least 3 months. The U.S. sample had 214 participants (99 male, 112 female, and 3 who did not specify gender), with a mean age of 19.03 years ($SD =$ 1.23) and a mean relationship length of 17.22 months ($SD = 12.26$). The Hong Kong sample consisted of 153 participants (71 male, 82 female), with a mean age of 20.44 years ($SD = 1.90$) and a mean relationship length of 23.47 months ($SD = 21.34$). The Mexican sample included 200 participants (96 male, 104 female), with a mean age of 23.34 years ($SD = 3.49$) and a mean relationship length of 28.70 months ($SD = 29.49$).

Materials

All questionnaires were translated from English into Chinese and Spanish using back-translation techniques (Brislin, 1970). The Chinese version of the measures was back-translated by scholars at the Chinese University of Hong Kong. The Spanish version was back-translated by scholars at National Autonomous University of Mexico. The questionnaires used in this investigation are described below in their order of presentation.

An adapted version of Experience of Close Relationships (ECR) measure by Brennan et al. (1998) was used to assess romantic attachment orientations. This 36-item measure has two subscales, each consisting of 18 items. Responses were made on 7-point Likert-type scales ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). Scores could range from 18 to 126 for each subscale. One subscale measured avoidance and the other measured anxiety. Participants responded to each subscale according to how they thought

and felt about romantic partners *in general*. Sample items from the avoidance subscale are: "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 from the anxiety subscale are: "I worry a fair amount about losing partners" and "My desire to be very close sometimes scares people away." In Hong Kong, Cronbach's alphas for the avoidance and anxiety subscales were .90 and .88, respectively. In the United States, they were .92 and .92, respectively. And in Mexico, they were .79 and .88, respectively.

Satisfaction with the current romantic relationship was measured using 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 two cultures, items were answered on 7-point Likert-type scales, from 1 (*not at all/poorly*) to 7 (*a great deal/extremely well*). In one culture, this scale was answered on an 8-point Likert-type scale, from 1 (*not at all/poorly*) to 8 (*a great deal/extremely well*). To establish comparability, each item was transformed into a proportion so that scores on each item could range from 0 to 1. All items were then summed to create a scale score for each participant. Scale scores could thus range from 0 to 7. Cronbach's alphas were .90 in Hong Kong, .83 in the United States, and .81 in Mexico.

The amount of perceived social support from the current romantic partner was measured by Sarason, Levine, Basham, and Sarason's (1983) Social Support Questionnaire. This seven-item measure consists of Likert-type scales ranging from 1 (*not at all*) to 7 (*very much*). Scale scores could range from 7 to 49. 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 alphas for Hong Kong, the United States, and Mexico were .90, .87, and .74, respectively.

Investment in the current romantic relationship was measured using the Investment Model Scale (Rusbult, 1980). This scale measures four facets of relationships: satisfaction, quality of alternatives, investments, and

commitment. Items were answered on 9-point Likert-type scales. The last item of the investment subscale was not given to one group of participants. To compensate for this omission, proportional scores (i.e., the total sum of all scale items divided by the number of items completed in each culture) were created. This resulted in one total investment score, which could range from 1 to 9 for each participant. Cronbach's alpha for the investment scale in Hong Kong, the United States, and Mexico were .84, .84, and .81, respectively. Higher scores indicate larger investments in the current relationship, lower quality of relationship alternatives, and greater relationship commitment and satisfaction.

Conflict in the current relationship was measured by a five-item scale created for this study. Items tapped the frequency of various forms of conflict with one's romantic partner. Items were answered on a 7-point Likert-type scale from 1 (*never*) to 7 (*almost every day*). Scale scores could range from 5 to 35. A sample item is: "How often do you and your romantic partner experience conflict?" Alphas for the conflict scale in Hong Kong, the United States, and Mexico were .92, .82, and .93, respectively.

Results

Descriptive statistics

The means and standard deviations in each culture for all of the variables are presented in Table 1.

Preliminary analyses

Preliminary analyses were first conducted to test for congruence of factor structures of the questionnaire measures across the three cultures. Because factor analyses combining raw data from each culture confound individual and cultural differences, the data were first standardized within each culture. The first scale examined was the adapted ECR. In the combined data from Hong Kong and Mexico and in the U.S. data, a principal components factor analysis followed by a varimax rotation suggested a clear two-factor structure for the ECR. To empirically compare the factor structures obtained in the combined Hong Kong/Mexico data with the structure obtained in the U.S. data, the Hong Kong/Mexico varimax matrix was Procrustes rotated to the U.S. structure (see McCrae, Zonderman, Costa, Bond, & Paunonen, 1996). The choice of the U.S. structure as the target for rotation was based on the fact that the ECR was developed in the United States and the goal of this research was to compare attachment processes in Hong Kong and Mexico to those in the United States. In the Procrustes rotated factor solution, all variables loaded highly (.39 and higher) on the appropriate factor (anxiety or avoidance). Furthermore, the factor congruence coefficients of the avoidance and anxiety subscales were .97 and .98, respectively, exceeding the suggested cutoff of .90 for establishing factor equivalency (see Barrett,

Table 1. *Means and standard deviations by culture for the primary variables*

	United States			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
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	40.14	8.25	198
Investment	6.70	0.95	212	6.26	0.90	153	5.86	1.17	172
Relationship conflict	14.06	5.76	214	15.11	6.31	152	14.30	5.49	196

Note. Ranges for the above scales are as follows: avoidance and anxiety = 7–126; relationship satisfaction = 0–7; social support = 7–49; investment = 1–9; relationship conflict = 5–35.

1986; McCrae et al., 1996).[1] The congruence of scale items was also tested (McCrae et al., 1996). Although no cutoff criterion has been established for item congruence values, the analyses indicated high levels of congruence among the individual ECR items, with an average item congruence of .97 and with 35 of the 36 items showing congruence coefficients above .91. In sum, these analyses suggest high levels of similarity in the factor structure of the adapted ECR across cultures, both at the factor level and at the individual item level.

Given that Procrustes rotations can be applied only to multidimensional scales, factor congruence for the other measures was investigated using Tucker's phi coefficient (see van de Vijver & Leung, 1997). Principal components factor analyses within the Hong Kong/Mexico data and within the U.S. data confirmed the appropriateness of a one-factor solution for all the other measures. The congruence of unidimensional factor structures of the combined Hong Kong and Mexico data compared with the U.S. data were as follows: relationship satisfaction, .99; social support, .97; investment, .96; and relationship conflict, .99.[2] These values exceed the traditional .90 cutoff criterion for establishing factor equivalency, indicating identical factor structures for these measures in the Mexican and Hong Kong data in relation to the U.S. data.

Primary regression analyses

The goal of the primary regression analyses was to compare results from the more collectivistic societies (Hong Kong and Mexico) in relation to the United States. In the first step of each of the following analyses, participants' age, relationship length (in months), and gender were entered as control variables.[3] The predictor variables entered in the next step of each analysis were participants' avoidance, anxiety, and two dummy-coded variables to contrast Hong Kong and Mexico with the United States (see Cohen, Cohen, West, & Aiken, 2003).[4] These contrasts were chosen because the goal of the research was to compare more collectivist cultures to a more individualist one. All continuous predictor variables were centered prior to the analyses (Cohen et al., 2003). In the final step of each analysis, the following two-way interactions were entered: both dummy variables by avoidance and, on an exploratory basis, both dummy variables by anxiety.[5] Following guidelines established by Aiken and West (1991), the main effects were interpreted in the regression step that contained the main effects without the interaction terms. The two-way interactions were interpreted only in the step that included all of the two-way interactions. The results of these analyses are reported below for each dependent variable.

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3. The percentage of males and females did not differ significantly across cultures. One-way analyses of covariance (ANCOVAs) using culture as the 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 ($M = 20.44$), followed by the United States ($M = 19.03$); all between-culture differences were significant, all $ps < .05$. Tukey post hoc tests for relationship length revealed that relationship length was greater in Hong Kong ($M = 23.47$) than in the United States ($M = 17.12$), and greater in Mexico ($M = 28.70$) than in the United States, both $ps < .05$. There was no significant difference between relationship length in Hong Kong versus Mexico. Given these significant differences, all of the primary analyses reported in this article statistically control for both age and relationship length.

4. The coding scheme made the United States the referent group for comparisons. It does not allow one to compare the mean differences and interactions between Hong Kong and Mexico. However, the goal of this study was to investigate whether attachment scores were related to outcomes in Hong Kong and Mexico in relation to the United States.

5. The three-way interactions between avoidance, anxiety, and contrast 1, as well as between avoidance, anxiety, and contrast 2 were examined. No three-way interactions were found, all $ts < 1.58$, all $ps > .05$.

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1. A separate Procrustes rotation comparing the Hong Kong ECR structure to that of the United States yielded congruence coefficients of .96 and .98 for the avoidance and anxiety subscales, respectively. An identical analysis comparing the Mexico ECR structure to that of the United States yielded congruence coefficients of .92 and .94 for the avoidance and anxiety subscales, respectively.

2. Analyses comparing the Hong Kong and Mexican data separately to the U.S. data revealed nearly identical results. In these analyses, the average congruence coefficient was .98. No coefficients were below .96.

All of the significant effects that emerged are reported.

Relationship satisfaction

The analysis that treated relationship satisfaction as the dependent measure revealed that, across cultures, avoidance, $\beta = -.38$, $t(469) = 9.55$, $p < .001$, and anxiety, $\beta = -.25$, $t(469) = 6.34$, $p < .001$, were both negatively related to relationship satisfaction. It also revealed that relationship satisfaction was higher in the United States than in Hong Kong, $\beta = -.27$, $t(469) = 6.10$, $p < .001$. Although the association between avoidance and relationship satisfaction was negative in all cultures, it was more strongly negative in Hong Kong, $\beta = -.23$, $t(465) = 4.85$, $p < .001$, and Mexico, $\beta = -.10$, $t(465) = 2.06$, $p < .05$, than in the United States (Figure 1).

Exploratory analyses indicated that attachment anxiety was more strongly related to relationship satisfaction in Hong Kong, $\beta = -.11$, $t(465) = 2.34$, $p < .05$, and Mexico, $\beta = -.15$, $t(465) = 3.18$, $p < .01$, than in the United States (Figure 2). Table 2 displays the regression coefficients for the analysis of relationship satisfaction.

### Perceptions of partner supportiveness

The analysis in which perceived social support was the dependent variable revealed that both avoidance, $\beta = -.37$, $t(478) = 9.58$, $p < .001$, and anxiety, $\beta = -.18$, $t(478) = 4.77$, $p < .001$, were negatively related to perceived partner support and that perceived support was higher in the United States than in Hong Kong, $\beta = -.35$, $t(478) = 8.27$, $p < .001$. Moreover, the negative relation between avoidance and perceived support was stronger in both Hong Kong, $\beta = -.22$, $t(474) = 4.79$, $p < .001$, and Mexico, $\beta = -.09$, $t(474) = 2.06$, $p < .05$, than in the United States (Figure 3).

Exploratory tests involving anxiety revealed that the negative relation between anxiety and perceived social support was stronger in Mexico than in the United States, $\beta = -.15$, $t(474) = 3.23$, $p < .01$ (Figure 4). Table 3 displays the regression coefficients for the analysis of perceived partner supportiveness.

Investment in relationships

The analyses in which the investment scales were the dependent variables revealed the following main effects. Relationship length was positively related to investment in the current relationship, $\beta = .11$, $t(468) = 2.62$, $p < .05$, confirming that people felt more invested in longer relationships. A significant gender effect indicated that women reported being more invested in their relationships than did
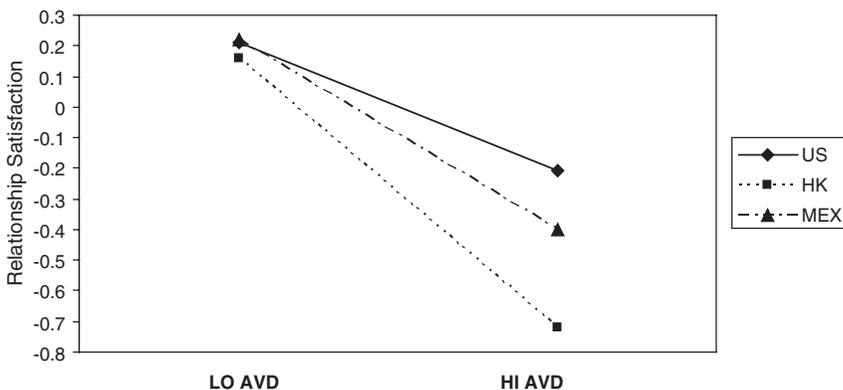
Figure 1. United States–Hong Kong Comparison × Avoidance interaction and United States–Mexico Comparison × Avoidance interaction: Relationship satisfaction.
Note. Regression lines are plotted for participants scoring 1 *SD* above and below the sample mean on avoidance. Scores on relationship satisfaction are presented in standardized units. US = United States; HK = Hong Kong; MEX = Mexico; AVD = avoidance.
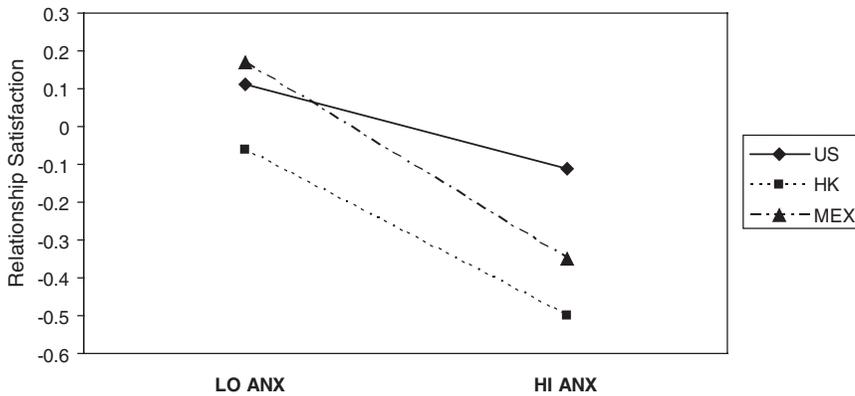
Figure 2. United States–Hong Kong Comparison × Anxiety interaction and United States–Mexico Comparison × Anxiety interaction: Relationship satisfaction.
Note. Regression lines are plotted for participants scoring 1 *SD* above and below the sample mean on anxiety. Scores on relationship satisfaction are presented in standardized units. US = United States; HK = Hong Kong; MEX = Mexico; ANX = anxiety.

men, $\beta = .10$, $t(468) = 2.35$, $p < .05$. Avoidance was negatively related to investment in relationships, $\beta = -.34$, $t(468) = 8.24$, $p < .001$. Investment was higher in the United States than in both Hong Kong, $\beta = -.17$, $t(468) = 3.60$, $p < .001$, and Mexico, $\beta = -.31$, $t(468) = 5.57$, $p < .001$.

Additional analyses revealed that the negative link between avoidance and investment was stronger in Hong Kong than in the United States, $\beta = -.11$, $t(464) = 2.19$, $p < .05$, and was marginally stronger in Mexico, $\beta = -.10$, $t(464) = 1.94$, $p = .053$ (Figure 5). Table 4 displays the regression coefficients for the analysis of relationship investment.

Relationship conflict

The analyses in which conflict was the dependent measure indicated that relationship length was positively associated with the amount of relationship conflict, $\beta = .20$, $t(477) = 4.03$, $p < .001$. Both avoidance, $\beta = .26$, $t(477) = 6.03$, $p < .001$, and anxiety, $\beta = .26$, $t(477) = 6.14$, $p < .001$, were also positively associated with conflict.

Further analyses indicated that the association between avoidance and conflict was stronger in Hong Kong, $\beta = .17$, $t(473) = 3.08$, $p < .01$ (Figure 6) than in the United States, but was only marginally stronger

in Mexico than in the United States, $\beta = .10$, $t(473) = 1.81$, $p = .07$. Analyses also revealed that even though anxiety predicted greater relationship conflict in both the United States and Mexico, this association was stronger in Mexico, $\beta = .15$, $t(473) = 2.74$, $p < .05$ (Figure 7). Table 5 displays the regression coefficients for the analysis of relationship conflict.

Mean levels of avoidance and anxiety

Comparisons of means between the United States and Hong Kong and the United States and Mexico were conducted using the two dummy-coded variables described above. Both were entered simultaneously in a linear regression analysis. The same control variables were used in this analysis as in the analyses reported above. It revealed significant differences in avoidance between the United States and Hong Kong, $\beta = .14$, $t(517) = 2.97$, $p < .01$, and between the United States and Mexico, $\beta = .24$, $t(517) = 4.98$, $p < .001$. Attachment avoidance was higher in both Hong Kong and Mexico than in the United States. Attachment anxiety was higher in Hong Kong than in the United States, $\beta = .17$, $t(522) = 3.53$, $p < .001$, but was not higher in Mexico than in the United States, $\beta = .06$, $t(522) = 1.27$.

Table 2. *Regression coefficients for relationship satisfaction*

|	Main effects			Interactions with avoidance				Interactions with anxiety			
	β	t	p		β	t	p		β	t	p
Age	−0.02	0.30	0.77								
Months with partner	−0.007	0.17	0.87								
Sex	−0.03	0.79	0.43								
Avd	−0.38	9.55	0.001	U.S.–HK × Avd	−0.23	4.85	0.001	U.S.–HK × Anx	−0.11	2.34	0.02
Anx	−0.25	6.34	0.001	U.S.–MX × Avd	−0.10	2.06	0.04	U.S.–MX × Anx	−0.15	3.18	0.002
U.S.–HK comparison	−0.27	6.10	0.001								
U.S.–MX comparison	−0.07	1.30	0.19								

Note. United States (U.S.) $N = 214$; Hong Kong (HK) $N = 153$; Mexico (MX) $N = 200$; R^2 for the regression model was .37. Avd = avoidance; Anx = anxiety.

Discussion

The major findings of this study indicate that higher levels of avoidance are strongly associated with negative relationship outcomes in Hong Kong, Mexico, and the United States. This supports the view advanced by Bowlby (1969) and other attachment theorists that attachment processes should operate in a relatively consistent manner across many, if not all, cultures. The results, however, also provide evidence of the effects of culture. Connections between avoidance and relationship difficulties varied in magnitude across cultures. For example, greater attachment avoidance was more strongly linked to heightened conflict, less perceived support, less investment, and poorer relationship satisfaction for respondents in Hong Kong than in the United States. In Mexico, greater avoidance was more strongly tied to lower relationship satisfaction, less perceived partner support, and more relationship conflict than it was the United States. These effects held when participants' age and relationship length were statistically controlled. The slightly older age and longer relationship length of participants in the collectivist cultures, therefore, cannot account for these disparities.

Several factors could contribute to the stronger linkage between avoidance and relationship problems in more collectivistic cultures. In these cultures, the partners of more avoidant people may find that their expectations of what constitutes an "appropriate" relationship are less completely met, creating disappointment and frustration. Partners' dissatisfaction, in turn, may contribute to the dissatisfaction and other problems reported by the more avoidant participants in this study. Parents and other family members may also believe that the relationship is not as it should be and may express their disapproval, creating additional pressures and problems for highly avoidant persons and their partners.

Another important contributing factor may be that pressures originating from relationship partners or other sources might force highly avoidant persons to engage in behaviors with which they are uncomfortable. They may, for instance, feel pressure to engage
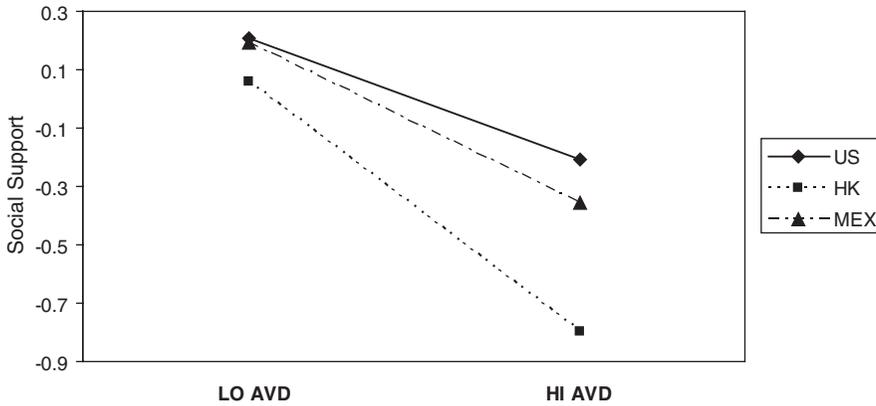
Figure 3. United States–Hong Kong Comparison × Avoidance interaction and United States–Mexico Comparison × Avoidance interaction: Perceived partner supportiveness.
Note. Regression lines are plotted for participants scoring 1 *SD* above and below the sample mean on avoidance. Scores on social support are presented in standardized units. US = United States; HK = Hong Kong; MEX = Mexico; AVD = avoidance.
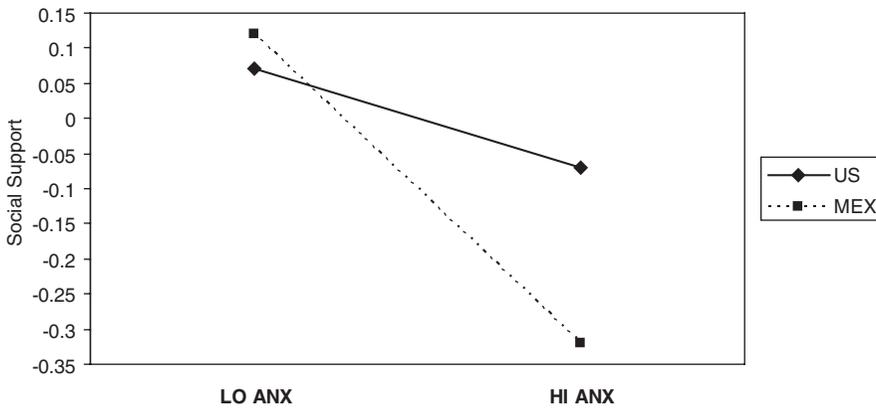
Figure 4. United States–Mexico Comparison × Anxiety interaction: Perceived partner supportiveness.
Note. Regression lines are plotted for participants scoring 1 *SD* above and below the sample mean on anxiety. Scores on social support are presented in standardized units. US = United States; MEX = Mexico; ANX = anxiety.

in levels or forms of self-disclosure that make them feel uncomfortable (Mikulincer & Naschon, 1991), or they may be required to perform care-taking behaviors they find discomforting or distressing (Wilson, Simpson, & Rholes, 2000). Bowlby (1988) conjectured that becoming "trapped" in a caretaker role was one of the greatest fears harbored by many highly avoidant people. Living in a culture that makes it difficult to avoid engagement in behaviors that are likely to activate

the attachment system should generate considerable stress and perhaps resentment in more avoidant people, exacerbating problems in their relationships.

No hypotheses about links between attachment anxiety and relationship satisfaction or the other relationship variables were advanced. As suggested in the Introduction, anxiety might appear to fit well in collectivist societies because of the emphasis that more anxious people place on relationship closeness. This

Table 3. *Regression coefficients for perceived partner supportiveness*

	Main effects			Interactions with avoidance				Interactions with anxiety			
	β	t	p		β	t	p		β	t	p
Age	−0.07	1.29	0.20	U.S.–HK × Avd	−0.22	4.79	0.001	U.S.–HK × Anx	−0.06	1.34	0.18
Months with partner	−0.02	0.49	0.62	U.S.–MX × Avd	−0.09	2.06	0.04	U.S.–MX × Anx	−0.15	3.23	0.001
Sex	0.07	1.86	0.06								
Avd	−0.37	9.58	0.001								
Anx	−0.18	4.77	0.001								
U.S.–HK comparison	−0.35	8.27	0.001								
U.S.–MX comparison	−0.08	1.44	0.15								

Note. United States (U.S.) $N = 214$; Hong Kong (HK) $N = 153$; Mexico (MX) $N = 200$; R^2 for the regression model was .38. Avd = avoidance; Anx = anxiety.

could make for a close match between anxiety and collectivist cultures. More anxious individuals, however, focus primarily on fulfilling their own needs for comfort and security rather than those of their partners, and their relationships are characterized by considerable conflict and disharmony (Rholes et al., 2008; Simpson et al., 1996). This aspect of anxiety could generate a mismatch between the behavioral tendencies of highly anxious people and the collectivist cultures in which they reside.

The cultural differences in associations between anxiety and relationship variables that emerged in this study were less consistent than those involving avoidance. In some cases, the connections between anxiety and the relationship variables were stronger in Hong Kong or Mexico than in the United States, but in some cases they were not. The association between anxiety and relationship satisfaction was, for example, stronger in Hong Kong and Mexico than in the United States. The association between anxiety and relationship investment, however, was not significantly different between any of the cultures. Moreover, associations between anxiety and perceptions of partner support and levels of relationship conflict were stronger in Mexico than in the United States, but were not stronger in Hong Kong than in the United States. Although highly anxious individuals yearn for close contact and a stronger sense of togetherness, their lack of trust, their egoistic orientation, and their emotional reactiveness (Tidwell, Reis, & Shaver, 1996) may all conspire to account for why more anxious people sometimes experience more relationship problems in the collectivist cultures. Their focus on closeness, however, may partially explain why these findings are not highly consistent across measures of relationships.

Consistent with past research, the present study found that mean levels of attachment avoidance and anxiety were higher in Hong Kong than in the United States. Avoidance, but not anxiety, was also higher in Mexico than in the United States. Research has shown that individuals in Japan (Sprecher, et al., 1994), Korea (You & Malley-Morrison, 2000), and China (DiTommaso, Brannen,
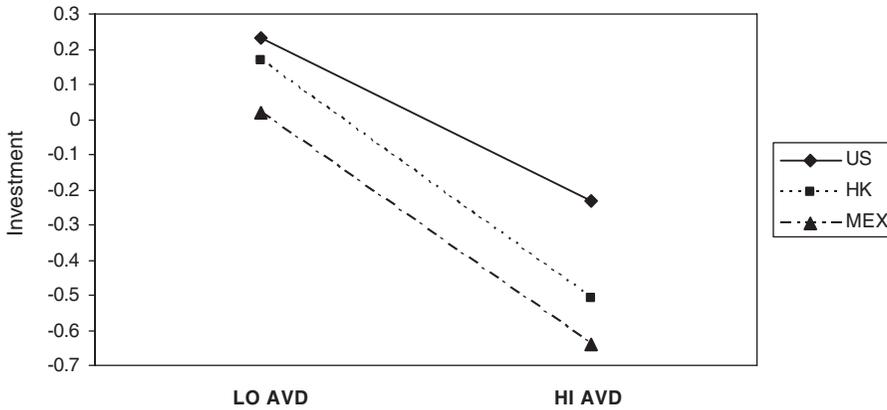
Figure 5. United States–Hong Kong Comparison × Avoidance interaction and United States–Mexico Comparison × Avoidance interaction: Investment Model Scales.
Note. Regression lines are plotted for participants scoring 1 *SD* above and below the sample mean on avoidance. Scores on relationship investment are presented in standardized units. US = United States; HK = Hong Kong; MEX = Mexico; AVD = avoidance.

& Burgess, 2005) report greater attachment avoidance than do individuals from North America (the United States and Canada), and a recent worldwide study on adult attachment concluded that individuals in East Asia are more likely to have preoccupied attachment styles (akin to anxious attachment in the present study) than individuals in other cultural regions (Schmitt et al., 2004).

Attachment orientations are largely a product of experiences with attachment figures across infancy, childhood, and adolescence (Bowlby, 1969, 1973). Cultural differences in parenting or other aspects of parent–child interactions should, therefore, partially explain cultural differences in mean levels of avoidance and anxiety. Research showing that parenting styles tend to be more authoritarian in some Eastern cultures (Keller, 2007), for example, may explain some of the cultural differences we found. Cultural norms and expectations that do not impact parenting practices or parent–child relationships should have much less bearing on the development of attachment orientations. Prescriptive cultural norms and expectations, which unlike attachment orientations are more *socially* acquired, should develop via different processes than do attachment orientations (e.g., through modeling). Hence, it is not inconsistent that people

in collective cultures exhibit higher mean levels of attachment avoidance or anxiety than those in individualist cultures such as the United States, despite the fact that attachment insecurity might be more harmful to relationships in collectivist cultures.[6]

Finally, relationship length was associated with the amount of conflict and the amount of investment in relationships. Both conflict and investment scores were higher in relationships of greater duration. The association between relationship length and investment seems attributable to the fact that investments accumulate over time, and the association between length and conflict seems to be attributable to the decline of an early "honeymoon" stage of relationships and the accumulation of issues within relationships that could cause conflict.

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6. The combination of higher levels of avoidance in the two more collectivistic cultures and stronger norms for harmony and closeness may seem difficult to reconcile. In doing so, it is important to distinguish between descriptive and proscriptive norms. The societal norms regarding harmony and closeness that we discuss are *prescriptive* norms that do not necessarily coincide with descriptive norms. For this reason, descriptive norms (e.g., higher levels of avoidance in more collectivistic cultures) are not necessarily at odds with prescriptive norms (e.g., expectations of greater harmony and more closeness in relationships in more collectivistic cultures).

**Table 4.** *Regression coefficients for Investment Model Scales*

	Main effects			Interactions with avoidance				Interactions with anxiety			
	β	t	p		β	t	p		β	t	p
Age	0.01	0.25	0.81	U.S.–HK × Avd	−0.11	2.19	0.03	U.S.–HK × Anx	−0.05	0.97	0.33
Months with partner	0.11	2.26	0.02	U.S.–MX × Avd	−0.10	1.94	0.05	U.S.–MX × Anx	−0.05	0.94	0.35
Sex	0.10	2.35	0.02								
Avd	−0.34	8.24	0.001								
Anx	0.04	0.90	0.37								
U.S.–HK comparison	−0.17	3.60	0.001								
U.S.–MX comparison	−0.31	5.57	0.001								

Note. United States (U.S.) $N = 214$; Hong Kong (HK) $N = 153$; Mexico (MX) $N = 200$; R^2 for the regression model was .26. Avd = avoidance; Anx = anxiety.

To our knowledge, the present study is the first to investigate the correlates of adult romantic attachment orientations across cultures. The findings are consistent with the central hypothesis that individual differences in attachment orientations which are *incongruent* with the cultural environment exacerbate problems within romantic relationships. A unique aspect of the study is that the sample included two collectivist cultures. The majority of past research on individualism and collectivism has compared individuals in Western societies with individuals from Confucian-heritage cultures only (e.g., Japan, Hong Kong, Taiwan, China, and Korea; see Oyserman et al., 2002). Demonstrating comparable effects in different types of collectivist cultures enhances the generalizability of the present findings.

The implications of this research must, however, be interpreted in view of certain limitations. One limitation is that the present study used a student sample in each culture. Although such samples are not representative of the larger population of a culture, they provide a cost-effective way to conduct initial cultural investigations. Indeed, most of the cross-cultural research published in the last several years has used college student participants. Students as a group may differ from other members of their culture by being further removed from traditional values and norms given their ties to a university. This may create greater uniformity across cultures than would be found with a more representative sample. To the extent that students are more removed from traditional values and norms, student samples may actually *underestimate* the extent of real cultural differences.

A second limitation is that only one member of each couple was included in this study. Information on the reactions of the partners of highly avoidant individuals would have made the study more complete. A third limitation is that all of the data are correlational, limiting our ability to draw causal inferences. We assume that relationship problems are partially determined by avoidance, although it is possible that relationship problems (e.g., lower satisfaction) might also generate greater avoidance.
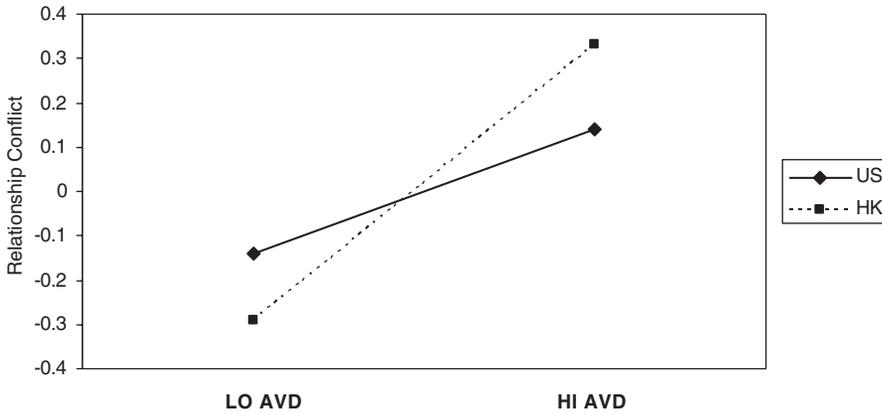
Figure 6. United States–Hong Kong Comparison × Avoidance interaction: Relationship conflict.
Note. Regression lines are plotted for participants scoring 1 *SD* above and below the sample mean on avoidance. Scores on relationship conflict are presented in standardized units. US = United States; HK = Hong Kong; AVD = avoidance.
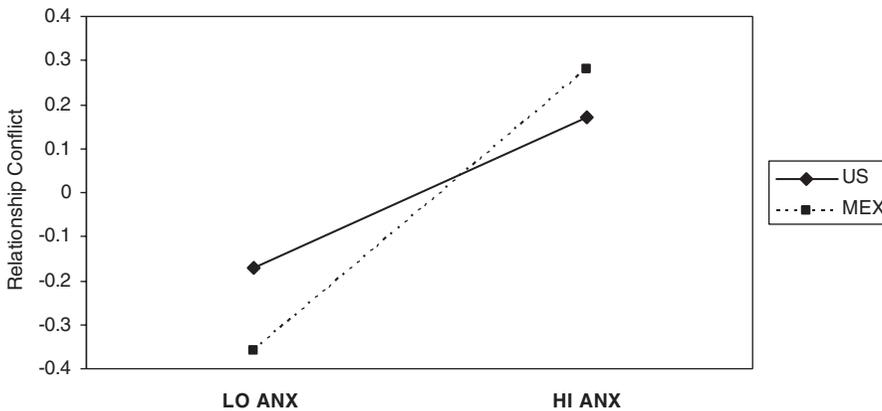
Figure 7. United States–Mexico Comparison × Anxiety interaction: Relationship conflict.
Note. Regression lines are plotted for participants scoring 1 *SD* above and below the sample mean on anxiety. Scores on relationship conflict are presented in standardized units. US = United States; MEX = Mexico; ANX = anxiety.

This possibility cannot be addressed with the present data. However, experimental studies have shown that priming attachment representations causally affects a number of attachment-related variables (e.g., Mikulincer et al., 2005), and longitudinal studies (e.g., Rholes et al., 2001) have confirmed that attachment orientations predict systematic changes in relationship satisfaction and related factors across time, suggesting that attachment orientations may exert causal effects.

Another limitation is the absence of discriminant validity analyses. Because the effects of avoidance and anxiety were not tested against other personality traits (e.g., the Big Five), it is possible that the effects reported could be attributable to traits other than attachment style.

A final concern involves possible cultural response sets. Specifically, individuals from Eastern cultures may be less likely to use extreme endpoints of Likert-type scales to not

Table 5. *Regression coefficients for relationship conflict*

	Main effects			Interactions with avoidance				Interactions with anxiety			
	β	t	p		β	t	p		β	t	p
Age	−0.07	1.08	0.28	U.S.–HK × Avd	0.17	3.08	0.002	U.S.–HK × Anx	0.03	0.51	0.61
Months with partner	0.20	4.03	0.001	U.S.–MX × Avd	0.10	1.81	0.07	U.S.–MX × Anx	0.15	2.74	0.006
Sex	−0.06	1.34	0.18								
Avd	0.26	6.03	0.001								
Anx	0.26	6.14	0.001								
U.S.–HK comparison	−0.01	−0.10	0.92								
U.S.–MX comparison	−0.05	0.87	0.38								

Note. United States (U.S.) $N = 214$; Hong Kong (HK) $N = 153$; Mexico (MX) $N = 200$; R^2 for the regression model was .19. Avd = avoidance; Anx = anxiety.

"stick out" (e.g., Benet-Martínez, 2007; Chen, Lee, & Stevenson, 1995), even though empirical evidence regarding cultural response sets is mixed (Church, 2001; Grimm & Church, 1999). Three findings from the current study argue against this interpretation. First, the findings indicate that the relation between avoidance and relationship outcomes is *more* extreme in Hong Kong versus the United States. The cultural response set hypothesis would suggest that Eastern participants should be *less* likely to use extreme scale responses, resulting in attenuated variance and weaker associations between avoidance and relationship functioning in Hong Kong. Second, centering the independent variables within each culture, a technique that reduces cultural differences due to response sets (Benet-Martínez, 2007; van de Vijver & Leung, 1997), does not change the findings. Finally, mean levels of avoidance and anxiety were more extreme in Hong Kong than in the United States.

In conclusion, this study confirms the importance of taking cultural fit into account when studying the consequences of secure versus insecure attachment orientations on relationships. Bowlby (1969, 1973, 1980) appears to have been correct in proposing that basic attachment processes and mechanisms are manifested similarly in different cultures. Culture, however, also appears to affect the way in which highly anxious and highly avoidant attachment orientations "translate" into important relational outcomes.

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