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I love you but . . . : Cultural differences in complexity of emotional experience during interaction with a romantic partner

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Studies suggest that emotional complexity—the experience of positive and negative emotion in response to the same event—is unusual in Western samples. However, recent research finds that the co-occurrence of positive and negative emotion during unstructured situations is more common among East Asians than Westerners, consistent with theories emphasising the prevalence of dialectical folk epistemology in East-Asian culture. The present study builds upon previous research by examining Asian- and European-Americans' experience of a particular positive emotion—love—and a situationally appropriate negative emotion during four structured laboratory conversations with their romantic partner. Among Asian Americans, love and the experience of negative emotion were typically less negatively correlated during these conversations than was true for European Americans.

Keywords: Emotion; Culture; Emotional complexity; Love; Romance.

Western models of emotion often conceptualise positive and negative emotions as opposites that cannot be experienced at the same time (e.g., Russell, 1980; Russell & Carroll, 1999). For example, Plutchik (1966) argued that specific emotions should be thought of as sets of opposing pairs, often reflecting desirable versus aversive states of affairs in a given domain. Studies of self-reported emotional experience with Western participants typically provide support for this model (e.g., Remington, Fabrigar, & Visser, 2000; Russell, 1980). In particular, strong positive

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emotion appears to preclude the experience of negative emotion, and vice versa (Diener & Iran-Nejad, 1986).

According to the evaluative space model of emotion, however, positive and negative emotions can be experienced together in moderate amounts (Cacioppo & Berntson, 1994; Cacioppo, Gardner, & Berntson, 1999). The experience of both positive and negative emotion in response to the same event, either at the same time or in near sequence, has been called *emotional complexity* (Larsen, McGraw, & Cacioppo, 2001; Larsen, McGraw, Mellers, & Cacioppo, 2004). Although this phenomenon may be rare for Americans, United States participants do report emotional complexity during events such as graduating from college or watching the film *Life is Beautiful* (Larsen et al., 2001), and the frequency of complex or mixed emotion may increase across adulthood (Ersner-Hershfield, Mikels, Sullivan, & Carstensen, 2008; Williams & Aaker, 2002).

Recently, cultural psychologists have suggested that the rarity of emotional complexity in Western samples may be due to a culturally dominant "linear" folk epistemology, an Aristotelian way of thinking about the world that emphasises three laws (Lewin, 1935; Peng & Nisbett, 1999): (1) the law of identity (if A is true now, then it is always true); (2) the law of non-contradiction (A cannot equal not A); and (3) the law of the excluded middle (propositions of fact must be either true or false). According to this tradition, emotions of opposite valence are contradictory, and the law of non-contradiction suggests that one should not be able to feel two opposing emotions at the same time.

In contrast, East-Asian folk epistemology emphasises a very different set of principles, based upon the philosophies of Confucianism, Taoism, and Buddhism. This epistemology, known as *naïve dialecticism*, emphasises three very different principles: (1) the principle of contradiction, that two pieces of knowledge may appear to oppose each other, while both being true; (2) the principle of change, that everything is continuously changing, and thus that knowledge is always a process, rather than an outcome; and (3), the principle of holism, that all things and events in the universe are interrelated (Nisbett, Peng, Choi, & Norenzayan, 2001; Peng & Nisbett, 1999; Spencer-Rodgers, Peng, Wang, & Hou, 2004). Unlike Western linear folk epistemology, naïve dialecticism allows for emotional complexity. According to the principle of contradiction, dialectical thinkers should not tend to think of emotions as a series of mutually exclusive opposites (e.g., "happy or sad", "love versus anger"). According to the principle of holism, dialectical thinkers should attend to multiple aspects of a given situation, thus making simultaneous positive and negative appraisals possible. In sum, individuals using linear epistemologies should tend to describe their emotions in oppositional, "either/or" terms, whereas individuals guided by dialectical epistemologies should report greater complexity or contradiction in their emotional experience.

Previous studies have examined aspects of emotional complexity in East-Asian and Western samples, typically finding cultural differences in complexity that are consistent with an epistemology-based explanation. Kitayama, Markus, and Kurokawa (2000) found that the frequencies with which specific positive and negative emotions were experienced in daily life were positively correlated among Japanese participants, but negatively correlated among Americans. Similarly, Schimmack, Oishi, and Diener (2002) found that frequencies of experiencing positive and negative emotions were less negatively correlated in several East-Asian cultures than in either individualist Western cultures or in non-Asian collectivist cultures—a finding that supports the role of dialecticism, rather than collectivism, in facilitating this aspect of complexity. Using an experience-sampling paradigm, Scollon and colleagues found that East-Asian participants were somewhat more likely than American participants to report feeling positive and negative emotion at the same time (Scollon, Diener, Oishi, & Biswas-Diener, 2005). Bringing this phenomenon into the laboratory, Bagozzi, Wong, and Yi (1999) found that correlations between positive and negative affect—both overall frequencies and

current affect while completing the questionnaires—were less negative among Chinese than among American participants. Recently, Perunovic, Heller, and Rafaeli (2007) found that Asian-American biculturals reported more complex emotional experience when recently primed toward Asian culture than when primed toward Western culture, as documented in diaries over a two-week period. In two of the aforementioned studies, an interaction between culture and participant sex was observed, with female participants demonstrating the effects of culture more strongly than males (Bagozzi et al., 1999; Schimmack et al., 2002).

Although these studies are consistent with the theory that East-Asian folk dialecticism facilitates greater emotional complexity relative to linear Western epistemology, they leave a number of questions unanswered. First, it is unclear in these studies whether cultural differences in emotional complexity reflect differences in the way emotions are conceptualised and emotional situations construed, as theorised, rather than simply reflecting cultural differences in the situations in which participants report their emotions. In the Kitayama et al. (2000) and Schimmack et al. (2002) studies, only self-reported emotion frequencies were analysed, rather than concurrent experience of positive and negative emotion. Given this methodology, it is unclear what kinds of situations evoked these emotions in the two sets of participants, so differences in eliciting situations could account for the observed emotion frequency patterns. In these studies it is also possible that complexity of dispositional affect, rather than complexity of momentary emotional experience, best characterises cultural differences between the Asian and Western samples. The experience-sampling method used by Scollon and colleagues (2005), and the diary method used by Perunovic et al. (2007), allowed researchers to study complexity of immediate experience, but did not control for the kinds of situations in which participants reported their emotions. The Bagozzi et al. (1999) study offered this control, with all participants reporting current emotion while filling out the questionnaires, but this was in the context of an asocial, relatively non-emotional task. Presumably participants' reports of current emotion in this study reflected whatever activities they had been engaged in prior to the session, which were also uncontrolled and unreported. Even in Western samples, certain kinds of situations will reliably elicit reports of emotional complexity (Larsen et al., 2001). One alternative explanation for previous findings is that East-Asian cultures present more of these kinds of situations than Western cultures.

Second, most previous studies of culture and emotional complexity have contrasted American samples with East-Asian samples. This is a common and powerful strategy for assessing cultural differences, but it does offer a very wide field of such differences, in that participants of different nationalities live in different political, economic, institutional, linguistic, interpersonal, and physical climates. One way to narrow this range of cultural aspects is to control for some of these differences, studying participants of different cultural backgrounds living in the same region, speaking the same language, and attending the same institution. This approach emphasises the effects of interpersonal culture, rather than other aspects of culture such as political or economic structure, or language (Tsai, Simeonova, & Watanabe, 2004).

In the present study, Asian-American and European-American same-ethnicity dating couples engaged in four semi-structured, laboratory conversations designed to elicit emotion. After each conversation, participants rated their own experience of several specific emotions during the task. In this way, the situations in which emotional complexity was measured were fairly well controlled, details of the conversations could be analysed to further assess comparability, and the target situations were inherently emotional. Because participants interacted with romantic partners of the same cultural background, we expected that the effects of interpersonal culture, as well as the emotional importance of the situation, would be enhanced.

Another novel feature of the present study is its focus on love as the target positive emotion, and

on ethnic differences in the co-occurrence of relationship-relevant negative emotion with feelings of love during interaction with one's romantic partner. In models of relationship satisfaction and stability based on studies of Western couples, expressions of affection and other positive emotions consistently predict positive relationship outcomes, whereas negative affect is a risk factor for relationship dissatisfaction or dissolution (e.g., Gottman, 1994; Gottman & Levenson, 1992; Johnson et al., 2005; Karney & Bradbury, 1995). Negative emotions need not always pose a threat to relationships, however, and may in some cases offer opportunities to enhance them (Feeney, Noller, & Roberts, 1998; Gottman, Coan, Carrere, & Swanson, 1998; Sanford & Rowatt, 2004). Evidence suggests that Western spouses can hold both positive and negative overall *evaluations* of their marriage at the same time (Fincham & Linfield, 1997). However, less is known about concurrent experience of specific negative and positive *emotions* during couples interaction.

Although the term "love" often refers to an enduring attitude or sentiment toward one's partner (Ekman, 1992; Fehr & Russell, 1991; Frijda, Mesquita, Sonnemans, & van Goozen, 1991), "surges" of love can also be experienced as a momentary state (Gonzaga, Keltner, Londahl, & Smith, 2001; Lazarus, 1991; Shaver, Morgan, & Wu, 1996), and can be measured, and even manipulated, in the laboratory (e.g., Gonzaga, Turner, Keltner, Campos, & Altemus, 2006; Kellerman, Lewis, & Laird, 1989; Shaver, Schwartz, Kirson, & O'Connor, 1987). The present study asked whether European- and Asian-American participants differed in the relationship between these surges of love and surges of negative emotion during a partner interaction. The target negative emotions were anger, contempt, and shame—relationship-focused emotions that may predict long-term difficulty with close relationships among Western samples (e.g., Baron et al., 2007; Covert, Tangney, Maddox, & Heleno, 2003; Fischer & Roseman, 2007). Although negative emotions can serve a corrective function in close relationships (this may be less true of contempt; Fischer & Roseman, 2007), European Americans tend to think of them as incompatible with love. Thus, European Americans may believe that when they are feeling anger, contempt, or shame, they cannot also be feeling love, and these and other negative emotions may be perceived as particularly threatening to the relationship (Cherlin, 1981). In general, Asian Americans find the experience of conflicting emotions to be less uncomfortable than European Americans, and they respond more positively to mixed emotional appeals (e.g., Williams & Aaker, 2002). If Asian Americans perceive love and negative emotion as non-contradictory, then the experience of the latter toward a romantic partner may be more typical and less threatening.

In the present study, participants rated their experience of love and situationally appropriate negative emotions during four conversations that captured everyday relationship experience. Analyses examined the correlations between love and the target negative emotion for each of the four conversations separately for Asian-American and European-American men and women (male and female samples were analysed separately due to the dyadic nature of the task). We hypothesised that correlations between love and the target negative emotion for each interaction task would tend to be more positive among Asian Americans than among their European-American counterparts. Also, the conversations were coded to examine effects of culture on the complexity of their content, to see whether differences in the eliciting situation might account for any observed cultural differences in emotional response (e.g., Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997).

METHOD

Participants

Participants were 98 individuals in 49 monogamous, heterosexual romantic relationships. Couples were recruited from a large, urban Western university and surrounding communities via flyers, the psychology department subject pool,

classroom visits, and university organisations (e.g., sororities, cultural groups). Advertisements for the study stated that both partners must be of the same ethnicity in order to participate, and that Asian-American and European-American couples were sought. Potential participants were asked three questions about culture/ethnicity when they contacted the experimenters: "What is your primary ethnic background?" "What ethnicity do you most identify with?" and "What culture do you most identify with?" Only couples in which both members self-identified as Asian American (24 couples) or European American (25 couples) on all three questions were retained for analyses. Mean age of Asian-American participants was 20.7 years, and of European-American participants 20.2 years. In exchange for completing the procedures participants received either classroom credit or a $15–25 payment.

Procedures

Participants arrived at the lab, signed consent forms, and were told that the 60- to 90-minute experimental session would include a questionnaire section and a videotaped discussion section. Participants were taken to separate rooms to complete the questionnaires (see measures, below).

After completing the questionnaires, couples were reunited in a room equipped with video cameras, and seated across from each other. Participants completed baseline current-emotion measures, rating their own emotional experience as well as estimating their partner's current experience.

The couples then engaged in four structured conversations designed to elicit emotions common in intimate relationships. For each conversation, couples were given instructions regarding the topic, and then encouraged to talk and act as they normally would if they were outside the lab. Although couples were not instructed to end each conversation at a particular time, all conversations lasted between two and five minutes. In each of the first three conversations, each partner took one turn as "speaker", sharing thoughts and experiences, and one as "listener". Thus, both partners played the "speaker" role once in each conversation. The order of speaking (male or female first) was randomly determined at the beginning of each couple's session, and was consistent throughout the first three conversations. The "speaker" in each turn was asked to respond to the target question. The "listener" in each turn was encouraged to act normally as they would outside the lab when the partner was talking.

The four conversations always proceeded in the same order. After each turn within each conversation, both members of the couple rated their own current emotions, and estimated their partner's emotions (see measures, below). In the first conversation, each member of the couple teased his/her partner, making up a nickname for the partner using a set of initials (A. D. or L. I.), and explaining the nickname in terms of a story about the partner. Teasing can be interpreted as an expression of affection and acceptance (Campos, Keltner, Beck, Gonzaga, & John, 2007), making love a reasonable response. On the other hand, teasing can threaten the target's self-esteem and sense of status, leading to feelings of shame (Campos et al., 2007; Keltner, Capps, Kring, Young, & Heerey, 2001).

In the second conversation, each partner shared a current concern external to the relationship that was causing him or her distress. The concern expressed by each partner was *not* about the relationship, and thus should not be experienced as directly threatening. We expected listeners to respond with love, reflecting concern for the partner's well-being and empathy for the partner's situation. On the other hand, if a listener believes that the speaker helped cause the situation causing concern, or is failing to take adequate responsibility for dealing with it, the listener may also feel some contempt—disdain and disrespect toward one of lower status. In Western samples this negative emotion has been associated with detachment from and rejection of the target (Fischer & Roseman, 2007), but in Asian culture, which tends to be more accepting of hierarchy (Matsumoto, 2007), momentary contempt and

condescension may not be considered quite as incompatible with love.

In the third conversation, each partner described his/her most important previous romantic relationship, discussing: (a) the things liked best about the past partner; (b) the things liked least about the past partner; and (c) the most important thing learned from that relationship. A listener might react to this with feelings of love, but also with anger if the speaker's description is interpreted as threatening, provocative, or hurtful.

In the final conversation participants discussed their first date; this final conversation did not involve taking turns. This conversation often elicited feelings of love for the partner. However, some participants reported moderate amounts of contempt, likely reflecting disillusionment with the partner after being in the relationship for some time.

Measures

In the questionnaire sections, participants completed measures of age, sex, current relationship length, ethnic background, and culture with which the participant most strongly identified. Participants also completed measures of attachment style and relationship commitment to rule out the possibility that ethnic differences in emotional experience could be attributed to different attitudes toward romantic relationships. Brennan, Clark, and Shaver's (1998) 36-item Experiences in Close Relationships scale was used as the measure of attachment anxiety ($\alpha =$ .90 in this sample) and avoidance ($\alpha = .90$ in this sample). The three commitment items asked: how often the couple discussed the future of the relationship; how committed the relationship was; and how much the participant loved his/her partner. Responses were given on a scale from 1 (*not at all*) to 7 (*a lot*). Cronbach's alpha for this 3-item scale was .69.

Before the first conversation, and immediately after the couple stopped speaking for each "turn" within each conversation, both members of the couple rated their experience of 21 different emotions during the turn, and estimated their partner's experience. The prompt was "Below are a number of emotions you might have felt during the discussion you just participated in. Please rate how much of these emotions you felt during the discussion". Participants provided a rating of each emotion on a scale from 0 (*No emotion*) to 8 (*Extreme emotion*). Thus, each person completed the emotion ratings nine times, allowing us to focus analyses on changes in emotion associated with each turn of the conversation, relative to a baseline (when couples entered the lab). The present analyses use ratings of the following emotions: Anger, Contempt, Love, and Shame.

Analyses

Because the conversations were designed to provoke emotion while each participant was listening (shame was likely to be elicited in the listener while being teased by the speaker, etc.), analyses focused on each participant's self-ratings of emotional experience during his/her listening "turn" in each conversation. The one exception to this was the first-date discussion, where there was no turn taking; in this case self-ratings for the entire conversation were analysed. Because the sample consisted of dating couples, procedures introduced dependencies between pairs of subjects in the data set. To control for this, we analysed data provided by males and females (as listeners) separately. This method is the most conservative option for addressing non-independent data, and also allows consideration of sex differences in the results.

Before calculating the correlations between ratings of Love and the target negative emotion for each conversation, self-report ratings of each emotion after each "listener" turn were regressed on baseline measures of that emotion taken prior to the interactions, and the residuals saved. These residual ratings thus reflect changes in emotion during the target conversation, focusing analyses on short-term emotional responses rather than long-term, dispositional attitudes toward the partner. Correlations between the two target emotion residuals were calculated for each conversation, with separate analyses for

Asian-American female listeners, Asian-American male listeners, European-American female listeners, and European-American male listeners. Finally, the significance of the differences between corresponding correlations in the Asian-American and European-American samples was calculated using Fisher *z*-tests.

The conversations were content-coded by two research assistants who were unaware of the research questions guiding the study. Elements coded in the conversations were designed to capture pairs of "opposing" messages likely to elicit love versus the target negative emotion in the listener. For the teasing conversation these were: praising or expressing respect/admiration for the listener; criticising or belittling the listener; expressing affection for the listener; and expressing humour at the listener's expense. Elements in the current concern conversation were: seeming confident in one's ability to fix or improve the situation; seeming to want the listener's help; taking responsibility for the situation; and blaming others or chance for the situation. Elements in the past partner conversation were: mentioning negative traits of or experiences with the past partner; mentioning positive traits of or experiences with the past partner; expressing love/affection for the current partner; and expressing love/affection for the past partner. Elements in the first date conversation were: talking about a positive event or feeling during the first date; talking about a negative event or feeling during the first date; talking about a recent positive event with or feeling toward the partner; and talking about a recent negative event with or feeling toward the partner.

For each turn of each conversation, coders assigned a score of 0 (*not present at all*) to 3 (*strongly present*) for each content element. These intensity codes were based upon both explicit content—the words spoken by participants—and paralinguistic cues such as non-word vocalisations, tone of voice, and facial expressions. Each coded element was rated independently, that is, coders were instructed that elements should not be considered mutually exclusive in each conversation. Thus, a speaker could express *both* respect and criticism in the teasing conversation, and so on. Both coders coded all conversations. Intraclass correlations for average ratings were calculated as a measure of reliability, and ranged between .59 and .91. The two coders' ratings were averaged before further analysis. Independent samples *t*-tests were used to compare mean content element ratings among European-American versus Asian-American participants, separately for women and men. Then, as with the emotion ratings, correlations between the "opposing" content elements were calculated for each interaction, with separate analyses for Asian-American female listeners, Asian-American male listeners, European-American female listeners, and European-American male listeners.

RESULTS

Comparability of Asian-American and European-American samples

Table 1 shows participants' mean age, relationship length, relationship commitment, and attachment anxiety and avoidance, broken down by participant sex and ethnicity. In factorial analyses of variance using each of these as the dependent variable, no main effects of either sex or culture were observed, Fs < 1.

Mean experience of target emotions

Independent samples *t*-tests were used to compare mean ratings for each target emotion, in each turn of conversation, across the two ethnic groups, separately for men and women. Mean ratings of the intensity of Love and of the target negative emotion for each task are reported in Table 2, separately for European and Asian Americans, and for men and women. The effect of culture on mean rating of the target emotion was significant in only one of 16 tests: Asian-American women gave higher ratings for Anger during the past partner conversation than did European-American women ($t = -2.35$, $p < .05$). Mean levels of Love in each conversation were moderate, averaging around the midpoint of the 0–8 scale, and

Table 1. *Mean age, relationship stability, and attachment scores by participant sex and ethnicity*

	Women		*Men*	
	European American M (SD)	*Asian American M (SD)*	*European American M (SD)*	*Asian American M (SD)*
Age (years)	20.00 (1.83)	20.08 (1.25)	20.46 (1.65)	21.25 (1.80)
Relationship length (months)	18.92 (17.79)	15.88 (12.51)	18.92 (17.79)	15.88 (12.51)
Commitment	5.97 (0.88)	6.14 (0.75)	5.66 (1.34)	6.17 (0.89)
Attachment anxiety	2.76 (0.64)	3.06 (0.84)	2.42 (0.74)	2.68 (0.79)
Attachment avoidance	2.77 (0.56)	2.55 (0.35)	2.87 (0.79)	2.81 (0.60)

varying considerably. Mean levels of the target negative emotions were typically quite low, but with some variability as well (high ratings were typically between 2 and 4), and a consistent tendency toward greater variability in the Asian-American than in the European-American sample.

Correlations between ratings of Love and target negative emotions

Pearson's correlations between ratings of Love and of the target negative emotion for each task, calculated separately for European-American and Asian-American men and women, are presented in Table 3. Among women, correlations between ratings of Love and Contempt differed significantly between European and Asian Americans in the first-date conversation ($z = 1.73$, $p < .05$); correlations between ratings of Love and Anger differed significantly in the past-partner conversation ($z = 1.67$, $p < .05$), and correlations between Love and Contempt differed at the marginal level of significance in the current-concern conversation ($z = 1.59$, $p = .06$). In each of these cases, the correlation was less negative in the Asian-American sample than in the European-American sample. No effect of culture was observed among women for the correlation between Love and Shame in the teasing conversation.

Among men, correlations between ratings of Love and Shame differed significantly between

Table 2. *Mean ratings, love and target negative emotions*

	Women		*Men*	
Conversation task	*European Americans M (SD)*	*Asian Americans M (SD)*	*European Americans M (SD)*	*Asian Americans M (SD)*
Tease				
Love	4.58 (2.97)	5.38 (2.36)	4.12 (2.51)	5.21 (2.77)
Shame	0.52 (0.71)	0.67 (1.24)	0.44 (0.92)	0.71 (2.01)
Current concern				
Love	4.40 (3.18)	4.88 (2.74)	3.52 (2.54)	4.00 (3.43)
Contempt	0.20 (0.50)	0.54 (1.69)	0.16 (0.37)	0.50 (1.25)
Past partner				
Love	4.17 (2.94)	4.62 (2.70)	3.84 (2.59)	3.75 (3.17)
Anger	0.25 (0.50)	0.92 (1.21)	1.08 (1.91)	0.83 (1.61)
First date				
Love	5.88 (2.54)	5.50 (2.04)	5.12 (2.63)	5.29 (2.88)
Contempt	0.33 (0.92)	0.50 (1.18)	0.38 (0.88)	0.17 (0.82)

Table 3. *Correlations between love and target negative emotions*

	Women		*Men*	
Conversation task	*European Americans*	*Asian Americans*	*European Americans*	*Asian Americans*
Tease				
Love w. Shame	−.10	−.36^{+}	**−.49***	**.14**
Current concern				
Love w. Contempt	**−.09**	**.35**	**−.08**	**.28**
Past partner				
Love w. Anger	**−.37**$^{+}$	**.09**	**−.27**	**.09**
First date				
Love w. Contempt	**−.26**	**.22**	**−.25**	**.20**

Note: For individual correlations, $+p < .10$, $^{*}p < .05$. Pairs of correlations differing at the $p \leq .10$ level of significance are printed in bold.

European and Asian Americans in the teasing interaction ($z = 2.36$, $p < .01$). The effects of culture on correlations between Love and Contempt in the current concern ($z = 1.27$, $p = .10$) and first date ($z = 1.59$, $p = .06$) conversations were marginally significant, as was the effect of culture on correlation between Love and Anger in the past partner conversation ($z = 1.25$, $p = .10$). Again, in each of these cases the correlation was less negative in the Asian-American sample than in the European-American sample.

Speaker content during conversation tasks

Results of content coding for the four conversations are presented in Table 4. On the whole, the explicit content and affective tone communicated by the speakers was quite similar across the European- and Asian-American samples. Among women, mean levels only differed significantly between the ethnic groups for discussing a positive event or feeling during the first date ($t = 3.17$, $p < .01$); mean levels of blaming others or chance during the current concern conversation ($t = 1.89$, $p = .07$) and of expressing love/affection for the past partner ($t = 1.80$, $p = .08$) differed at the marginal level of significance. Among men, mean levels differed significantly between the ethnic groups for discussing a positive event or feeling during the first date ($t = 3.11$, $p < .01$), and the difference between mean levels of humour at the partner's expense in the teasing conversation were marginally significant ($t = 1.68$, $p = .10$). In each case, means in the Asian-American sample were lower than in the European-American sample.

More important, correlations between "opposing" content elements were typically negative or near zero in both ethnic groups, and were quite similar between European and Asian Americans. There were two exceptions to this trend. The correlation between criticising/belittling the partner and expressing praise/respect for the partner during the teasing conversation was more negatively correlated among European-American men than among Asian-American men ($z = 2.04$, $p < .05$). Also, the correlation between expressing love/affection for the past partner and love/affection for the current partner in the past partner conversation was more negative among European-American than among Asian-American men ($z = 1.55$, $p = .06$). In 11 of 16 cases, however, correlations between opposing content elements were actually more negative among the Asian-American sample than among the European-American sample, though these differences did not reach significance. In sum, given the similarity in the content of conversations held by the European- and Asian-American couples, it is unlikely that differences in affective complexity experienced by the participants can be attributed to differences in the eliciting situation.

Table 4. *Speaker content during conversations*

	Women					*Men*				
		Mean		*Pearson's r*			*Mean*		*Pearson's r*	
Task and content code	*ICC*	*EA*	*AA*	*EA*	*AA*	*ICC*	*EA*	*AA*	*EA*	*AA*
Teasing										
Praise/respect partner	.91	0.54	0.41	−.44*	−.41^{+}	.86	0.68	0.45	**−.59***	**−.10**
Criticise/belittle partner	.86	1.38	1.31			.86	1.22	0.79		
Express affection	.69	1.92	1.57	.20	−.10	.70	2.02	2.00	.14	.08
Humour at partner's expense	.59	0.98	0.64^{+}			.78	1.20	0.74^{+}		
Current concern										
Express ability to fix situation	.61	1.10	1.40	.05	.01	.84	1.06	1.24	.34^{+}	.16
Seem to want partner's help	.72	1.06	0.95			.86	0.98	0.86		
Take responsibility	.78	1.24	1.36	−.32	−.42^{+}	.86	1.28	1.45	−.34	−.47*
Blame others/chance	.82	1.70	1.12^{+}			.68	1.42	1.29		
Past partner										
Negative experiences/traits	.89	2.20	2.20	−.13	−.21	.71	1.84	1.85	−.19	−.46*
Positive experiences/traits	.67	1.93	1.58			.76	1.70	1.33		
Love/affection current partner	.87	0.28	0.15	−.27	−.20	.85	0.59	0.35	**−.17**	**.26**
Love/affection past partner	.74	0.72	0.33^{+}			.68	0.45	0.45		
First date										
Positive event/feeling then	.84	2.33	1.48*	−.31	−.22	.89	2.48	1.74*	−.19	−.31
Negative event/feeling then	.83	1.37	1.21			.78	1.11	0.98		
Positive event/feeling now	.60	0.30	0.26	−.04	−.27	.70	0.30	0.12	−.04	−.18
Negative event/feeling now	.85	0.28	0.26			.82	0.09	0.24		

Note: For mean content code ratings, significance symbols after the Asian American mean indicate difference from the corresponding European–American mean at $^{+}p < .10$ and $^{*}p < .05$. For correlations between opposing content codes, symbols indicate significance of the Pearson's r for that subsample at $^{+}p < .10$ and $^{*}p < .05$. European American–Asian American pairs of correlations differing at the $p < .10$ level of significance are printed in bold.

DISCUSSION

Building upon previous studies of cultural differences in emotional complexity, the present findings provide more evidence that East-Asian culture offers fewer barriers than Western culture to co-occurring experience of positive and negative emotion. In the present study, participants reported their experience of love and relationship-focused negative emotions during semi-structured conversations with their romantic partner. Asian-American participants were more likely to report both love and negative emotion, whereas European-American participants tended to report experiencing either love or the target negative emotion, during these interactions. For example, when hearing a partner talk about a current non-relationship concern, Asian Americans who reported more love toward their partner might also report some contempt as well; European Americans reported either love or contempt, but not both. This suggests that among the European-American participants, feelings of anger, contempt, or shame during interaction with a romantic partner were thought to preclude feelings of love, whereas Asian-American participants were more likely to report feeling both types of emotion.

These effects of culture were observed in a sample of participants residing in the same geographical region of the United States, speaking the same language, rating their emotions using the same scales, and attending the same university. The content of European- and Asian-American

couples' conversations was quite similar, with neither group expressing markedly more negative or complex messages. In the few mean differences between the two groups' content, Asian-American speakers tended to express less content likely to elicit the listener's target negative emotion than was true for European Americans, not more. Thus, speaker content—that is, the situation to which participants were responding—does not offer a strong explanation of the observed cultural differences in co-occurrence of negative emotion and love. Also, correlations between opposing speaker content elements did not map on to the patterns observed in emotion ratings. Asian-American speaker content was often more polarised than European-American content, rather than more complex. The one case in which European-American speaker content was significantly more polarised—men teasing their female partners either praised them or criticised them, but not both—corresponded to one case in which we did *not* observe the predicted pattern in emotional complexity—female listeners in the teasing conversation. Thus, although the two groups' conversations may have differed in other, unmeasured ways, it appears unlikely that differences in speaker content directly relevant to the target emotions can account for the observed group differences in complexity of emotional experience.

We propose that this group difference reflects underlying cultural differences in dominant folk epistemology, with East-Asian culture emphasising a dialectical approach and Western culture emphasising a linear, Aristotelian approach to reasoning. Although we did not explicitly measure folk epistemology in the present study, previous studies do suggest that cultural differences in complexity of dispositional affect reflect folk epistemology rather than other cultural variables, such as individualism/collectivism (Schimmack et al., 2002). However, an appropriate next step in this line of research would more explicitly examine epistemology as a mediator of cultural differences.

Findings from the present study did not replicate the culture by participant sex interaction found in previous studies of culture and emotional complexity (Bagozzi et al., 1999; Schimmack et al., 2002). In those studies, the effects of culture were generally more prominent among female than among male participants. The lack of replication in this study might be due to several sources. First, the target task required that male and female participants interact with each other, which may have blurred sex differences. Second, gender differences may generally be less prominent in this sample (from an elite university in the San Francisco Bay area) than in samples from Asian countries or some other regions of the United States.

The present findings also offer some insight into the question of whether complexity is only possible given moderate amounts of positive and negative emotion. One possibility emerging from prior research is that the experience of strong positive or strong negative emotion precludes experience of opposite-valence emotions at the same time (Cacioppo & Berntson, 1994; Cacioppo et al., 1999). The mean ratings of love in these conversations were above the midpoint on a 0–8 scale, with standard deviations of over two points—typical of satisfied, committed couples. Our analyses of emotional complexity focused on change scores from the beginning of the lab session to each conversation (necessary to ensure the measure reflected love in response to the conversation, rather than dispositional love toward the partner), and individuals with the greatest change scores for each conversation might not always have been those with the highest absolute scores. However, assuming that dispositional and state love are correlated, and given the positive correlations often observed among Asian Americans between love and the target negative emotion, it appears that those Asian Americans who reported experiencing the target negative emotion at all during these conversations were also those who reported the strongest experience of love. However, it must be noted that the intensity of the target negative emotion in these cases was fairly low, with highest ratings typically between two and four on the 9-point scale, so the present findings do not document the co-occurrence of strong positive *and* strong negative emotion at the same time. Also, the emotion

ratings for each conversation reflect averages over a period of a few minutes, so these analyses cannot address whether positive and negative emotion can be experienced at the same exact moment in time. Positive correlations between love and negative emotion ratings in this study can also be explained by oscillation between the two emotions over the course of the conversation. Further research allowing measurement on a more fine-grained time scale is needed to address whether truly simultaneous positive and negative emotion is possible.

Taken as a whole, these findings encourage further study of the cultural shaping of emotion. Previous studies in this area have typically examined effects of culture or gender on the experience or expression of single emotions. The present findings, considered alongside others upon which they build (e.g., Bagozzi et al., 1999; Kitayama et al., 2000; Schimmack et al., 2002; Scollon et al., 2005), suggest that the relationship between emotions might prove especially fruitful ground for understanding the effects of culture and gender on emotion experience.

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