

Sympathy and Responses to Suffering: Similarity and Variation in China and the United States

Jennifer L. Goetz
Centre College

Kaiping Peng
Tsinghua University

Feeling sympathy in response to suffering appears to be a universal human experience, but we know very little about how it is experienced in non-Western cultures. In the present studies, we show that sympathy is a complex emotion that has a distinct appraisal theme of wanting to alleviate suffering and that cultural variation occurs in interpretations of suffering and behavioral responses. In particular, the present studies show that sympathy is conceptualized similarly in both the United States and China (Studies 1 and 2), and that it is elicited by undeserved suffering in both cultures (Study 2), is experienced as unpleasant (Study 2), and motivates a desire to help others (Studies 2, 3, and 4). Results also revealed cultural differences in attributions of suffering, perceptions of deservingness, and behavioral tendencies to help and punish individuals who are suffering. The present findings support sympathy as a distinct emotion that responds to suffering and open the door for cultural variation in interpretations and responses to suffering, including decisions to help.

Keywords: sympathy, compassion, culture, emotion, appraisal

Supplemental materials: <http://dx.doi.org/10.1037/emo0000443.supp>

Sympathy . . . will have been increased through natural selection; for those communities, which included the greatest number of the most sympathetic members, would flourish best, and rear the greatest number of offspring.

—Charles Darwin, *The Descent of Man*

Almost 150 years ago in his treatise on *The Descent of Man* (Darwin, 1879/2004), Darwin recognized that sympathy was critical to human survival and development of society. Since then, a variety of theories have emerged to reveal how a capacity to respond to the suffering of others with concern and caring likely emerged from natural and sexual selection. A large body of research, conducted primarily in Western cultures, has used a variety of terms to identify the other-oriented feeling that occurs in response to suffering and that motivates caring for others, including sympathy (Eisenberg & Eggum, 2009), empathy (Hoffman, 2008), compassion (Goetz, Keltner, & Simon-Thomas, 2010; see also Goetz & Simon-Thomas, 2017), empathic concern (Batson, 2011),

and even pity (Weiner, Perry, & Magnusson, 1988). Despite this research, psychological science knows surprisingly little about how this emotion is experienced in non-Western cultures.

In the current research, we test the hypothesis that sympathy is a distinct emotion in a non-Western culture and explore how culture influences its experience. Specifically, we predict that in both American and Chinese cultures, sympathy is a distinct and unpleasant emotion that motivates help in response to undeserved suffering. In addition, we predict that cultural variation will occur in how suffering is interpreted and in behavioral responses to suffering. We first review previous research on sympathy and related states, focusing in particular on the core appraisals associated with it. We then discuss research on cultural context to make predictions about how sympathy may be experienced differently in the two cultures.

An Evolved Response to Suffering

Evolutionary accounts of sympathy and altruistic behavior argue that a tendency to respond to suffering with protective and helping behavior likely evolved out of parental care for helpless offspring (see Batson, 2011, and Preston, 2013, for reviews) and later expanded to respond to a variety of kin and nonkin, including group members, potential mates, and cooperation partners (Hamilton, 1964; Sober & Wilson, 1999; Trivers, 1971). Consistent with these theoretical accounts, perception of pain, distress, and need consistently elicit sympathy and closely related feelings of compassion and concern (Batson, 2011; Goetz et al., 2010). Consistent with discrete emotion accounts (Ekman, 1992), experience of sympathy has been associated with distinct patterns of sympathetic and parasympathetic arousal (Stellar, Cohen, Oveis, & Keltner,

This article was published Online First May 24, 2018.

Jennifer L. Goetz, Department of Psychology, Centre College; Kaiping Peng, Department of Psychology, Tsinghua University.

This research was supported in part by the Centre College Faculty Development Fund, and portions of this data were collected while Jennifer Goetz was at Middlebury College. We thank Ting Li, Xiaolang Ma, and Robin Curtis for data collection and coding; Xiaowei Lv, Shuang Liu, Qipu He, and Sangyi Hu for data collection and translation; and Jiangqun Liao and Elizabeth Page-Gould for support and feedback.

Correspondence concerning this article should be addressed to Jennifer L. Goetz, Department of Psychology, Centre College, 600 West Walnut Street, Danville, KY 40422. E-mail: jennifer.goetz@centre.edu

2015), and can be recognized in nonverbal facial expression and posture (Goetz et al., 2010), touch (Hertenstein, Keltner, App, Bulleit, & Jaskolka, 2006), and brief vocal bursts (Simon-Thomas, Keltner, Sauter, Sinicropi-Yao, & Abramson, 2009). A large body of research reveals feeling sympathy (sometimes called *empathic concern*) motivates helping that is directed at increasing the other's welfare even when providing help is costly or potentially painful (Batson, O'Quin, Fultz, Vanderplas, & Isen, 1983), when escape from the situation is easy (Batson, Duncan, Ackerman, Buckley, & Birch, 1981), and when other methods of experiencing positive affect are available (Batson et al., 1989). This research has compared sympathy with sadness, love, anger, and the often concomitant experience of self-oriented personal distress when exposed to another's pain.

In addition, a functional approach to sympathy suggests that it has a distinct pattern of cognitive appraisal, including appraisal of (a) the sufferer as relevant to the self and the suffering as goal-incongruent, (b) the sufferer as deserving of sympathy and help, and (c) one's own ability to cope with the situation at hand (Goetz et al., 2010). Research evidence is consistent with these assertions. First, sympathy is stronger and costly help is more likely to be given to close family members (Burnstein, Crandall, & Kitayama, 1994; Korchmaros & Kenny, 2001), emotionally close individuals (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997; Korchmaros & Kenny, 2001), and individuals with whom people feel similar (Valdesolo & Desteno, 2011). Second, when misfortune is seen as undeserved, it elicits sympathy, but when misfortune is seen as deserved, it elicits pleasure or *schadenfreude* (Feather, McKee, & Bekker, 2011). Sympathy and helping are more likely when the sufferer is judged as not responsible for—and, by implication, not deserving of—their situation (Rudolph, Roesch, Greitemeyer, & Weiner, 2004). In contrast, sufferers who are judged as responsible for their plight elicit anger and a desire to punish. Finally, research suggests that when individuals anticipate that the costs of feeling sympathy may exceed their resources, they downregulate their emotional experience (Cameron & Payne, 2011).

Cultural Universality and Variation in Sympathy

All human beings have a mind that cannot bear to see the sufferings of others . . . From this it may be seen that one who lacks a mind that feels pity and compassion would not be human.

—*Mencius* (2A:6), trans. by de Bary & Bloom, 1999

Sympathy, compassion, and pity have long played a role in non-Western philosophical and religious traditions (Ch'en, 1972; Shun, 1997), and contemporary research is supportive of the argument that experience of sympathy is an emotion experienced across cultures. Cooperation, reciprocity, and benevolence toward others are highly valued across cultures (Miller & Bersoff, 1994; Schwartz & Bardi, 2001), and sympathy and related terms are highly prototypical emotions in studies of the emotion lexicon in Chinese (Shaver, Wu, & Schwartz, 1992) and Indonesian (Shaver, Murdaya, & Fraley, 2001). Suffering and need also appear to be universal elicitors of sympathy. For example, young children from four different cultures (Germany, Malaysia, Indonesia, and Israel) expressed sympathy nonverbally when a female experimenter expressed sadness when her balloon broke (Trommsdorff, Friedlmeier, & Mayer, 2007). In addition, Ukrainian participants responded with sympathy to individuals who needed an organ

transplant (Mullen & Skitka, 2009), and Chinese participants responded with sympathy for AIDS patients (Zhang, Rivkin, & An, 2013), for individuals who were fired from their job (Zhang, Xia, & Li, 2007), and for individuals who failed at a task they tried hard to complete (Zhang, Reyna, Qian, & Yu, 2008).

Although the existence of sympathy and its elicitors appears to be similar across cultures, questions remain. Research suggests that cultural values may influence who is considered an appropriate target of sympathy. In individualistic cultures like the United States, an independent self-construal is more prevalent, and the self is thought of as unique, bounded, and autonomous (Markus & Kitayama, 1991). In contrast, in collectivistic cultures like China, an interdependent self-construal is more likely, and the self is defined fundamentally in connection with close others. Individuals with an interdependent self-construal have distinct in-groups and out-groups, whereas an independent self-construal is associated with more fluid in-group identification (Markus & Kitayama, 2010). Consistent with a strict distinction, individuals from collectivistic cultures (e.g., China and Japan) help members of their own groups more than Americans (Wong & Hong, 2005) and are more accurate when inferring the emotions of close others than European Americans (Ma-Kellams & Blascovich, 2012). The reverse pattern has been found for outgroup members and strangers. For example, East Asians reported less sympathy than British participants when responding to strangers' physical and social pain (Atkins, Uskul, & Cooper, 2016). Thus, a particular focus of the current study was to examine whether relationship type moderated experience of sympathy or motivation to help.

As a moral emotion, it is likely that experience of sympathy is influenced by conceptions of morality, which vary considerably across cultures (Graham et al., 2011; Scherer, 1997). In particular, appraisals of responsibility and deservingness may vary in the role they play in sympathy (e.g., Mullen & Skitka, 2009; but see Zhang et al., 2013). Strong theses have been put forward to argue that sympathy is highly ritualized and elaborated in American individualized culture (Clark, 1997), and research shows that Americans value helping behavior and prosocial action more when it is motivated by emotions like sympathy rather than by obligation or reciprocity, whereas individuals from more collectivistic cultures may value helping behavior regardless of how it is motivated (Miller & Bersoff, 1994). Similarly, research shows collectivistic values are associated with seeing suffering as necessary for retaining social order (Sullivan, Landau, Kay, & Rothschild, 2012). In one study, Chinese were more likely than Americans to see the suffering associated with depression as serving the purpose of reinforcing social norms (Sullivan et al., 2016). Consistent with this logic, individuals from highly collectivistic Chinese culture may see suffering as more deserved than Americans and may be less motivated to help those who are suffering, regardless of relationship. Whether they will feel less sympathy, however, is unclear.

Finally, research shows that culture influences how emotions are expressed (Matsumoto, 1990) and valued (Kitayama, Mesquita, & Karasawa, 2006; Tsai, Knutson, & Fung, 2006). For example, Koopmann-Holm and Tsai (2014) found that American sympathy cards were more likely to place emphasis on positive content, whereas German sympathy cards were also likely to contain negative content. This suggests that sympathy may be consistently felt

across cultures, but there is variation in when and how sympathy is expressed.

The Present Research

We present four studies in which we examine experiences of sympathy and responses to suffering in the United States and China. In Study 1, we examine whether sympathy is conceptualized as distinct from other emotions. In Study 2, we compare experiences of sympathy with two closely related emotions—sadness and love—to identify its core appraisal theme. Finally, in Studies 3 and 4, we shift to an antecedent-based approach and examine responses to suffering to test whether sympathy is elicited, whether explanations of suffering differ in the two cultures, and whether behavioral responses to suffering vary.

Study 1: Cultural Similarity in Conceptions of Sympathy

Our goal in Study 1 was to examine conceptions of sympathy in relation to other emotion terms in English and Chinese. Because sympathy is an emotion that responds to negative events but motivates socially valued behaviors, we hypothesized that sympathy would be conceptualized as neither strictly negative nor positive, but rather as a complex emotion that is associated with both negative and positive emotions. Consistent with previous research, we predicted that sympathy would be considered most similar to love and sadness (Shaver, Schwartz, Kirson, & O'Connor, 1987) but would not completely overlap with these emotions in either culture.

Method

Participants. One hundred fifty-two U.S.-born American students (40.6% White, 13.7% Asian American, 4.3% Latino, 2% African American, 63.8% women; $M_{age} = 20.03$ years, $SD_{age} = 3.70$) and 145 Chinese students (48.9% female; $M_{age} = 20.58$ years, $SD_{age} = 1.82$) participated in the study. American students were enrolled in psychology courses and received partial course credit, and Chinese students were recruited with flyers and electronic bulletin boards on campus and were paid for their participation. The current measures were part of a larger survey not reported here that Americans completed for partial course credit and that Chinese students completed for payment.

Procedure. All study materials were translated and verified by a team of bilingual research assistants using standard translation and back-translation procedures. Translation of terms was discussed at length with the primary and secondary authors as well as bilingual research assistants. All participants came into the lab and completed paper-and-pencil surveys.

Materials and measures. Participants rated the similarity of 10 emotion terms on a 7-point pictorial scale adapted from the Inclusion of Other in the Self Scale (Aron, Aron, & Smollan, 1992), in which two circles overlapped to varying degrees. They were asked to choose the image that best represented the similarity of each of 44 emotion pairs that included the following terms: sympathy (同情, *tóngqíng*), love (爱, *ài*), joy (喜悦, *xǐyuè*), pride (骄傲, *jiāo'ào*), sadness (悲哀, *bēi'āi*), embarrassment (尴尬, *gāngà*), shame (羞耻, *xiūchǐ*), fear (恐惧, *kǒngjù*), anger (愤怒,

fènnù), and disgust (厌恶, *yànwù*). Participants in both cultures rated pairs in the same order (see the [online supplemental materials](#)).

Results and Discussion

Exploratory analyses. We expected two factors to emerge from the similarity ratings: (a) a Same Valence factor including positive–positive emotion pairs and negative–negative emotion pairs, and (b) an Opposite Valence factor for positive–negative emotion pairs. We ran separate exploratory factor analyses (EFAs) in each culture with all of the emotion pairs and forced two factors with maximum likelihood estimation and promax rotation. In both cultures, the two factors to emerge were clearly a Same Valence factor (e.g., anger and shame, pride and joy) and an Opposite Valence factor (e.g., pride and sadness, sadness and joy).

Consistent with the prediction that sympathy is conceptualized as a complex emotion, sympathy pairs did not load clearly on either Same Valence or Opposite Valence factors. In the United States, three sympathy pairs (sympathy and sadness, sympathy and love, and sympathy and joy; loadings ranged from .41 to .32) loaded on the Same Valence factor and the other sympathy pairs loaded on the Opposite Valence factor (anger and sympathy, pride and sympathy, sympathy and fear, sympathy and disgust; loadings ranged from .44 to .38). The sympathy and embarrassment pair did not load on either factor. In the Chinese responses, two pairs loaded on the Same Valence factor (sympathy and sadness, sympathy and love; loadings of .45 and .32), and seven sympathy pairs loaded on the Opposite Valence factor (sympathy and fear, disgust and sympathy, sympathy and shame; and pride and sympathy, anger and sympathy, sympathy and joy, and embarrassment and sympathy; loadings ranged from .54 to .38). When we forced a third factor, no meaningful patterns emerged.

Is sympathy positive or negative? As a complex emotion, we predicted that sympathy would be rated as neither strictly positive nor strictly negative. To test this, we averaged similarity ratings for the sympathy-positive pairs (e.g., sympathy and joy, three pairs, $\alpha > .44$) as well as the sympathy-negative pairs (e.g., sympathy and fear, six pairs, $\alpha > .68$) and compared them with average similarity ratings of the same-valence pairs (18 pairs, $\alpha > .84$) and the opposite-valence pairs (18 pairs, $\alpha > .86$). In a mixed ANOVA with pair type repeated and culture as a between subjects effect, there was a significant effect of pair type, $F(3, 882) = 335.89$, $p < .001$, $\eta^2 = .53$, and a significant interaction of pair type and culture, $F(3, 882) = 10.37$, $p < .001$, $\eta^2 = .034$, but no significant main effect of culture, $F(1, 294) = 2.44$, $p = .11$, $\eta^2 = .008$. Across both cultures, same-valence emotion pairs were rated as most similar, followed by sympathy-positive pairs, then by sympathy-negative pairs, and, finally, by opposite-valence pairs (see [Table 1](#), pairwise $ps < .001$). The only cultural difference was that American participants rated same-valence pairs as slightly more similar than Chinese participants ($p < .001$). There were no cultural differences for the other pair types ($ps > .27$). These results are consistent with the hypothesis that sympathy is considered neither strictly positive nor strictly negative and that it is conceptualized similarly in the United States and China.

Is sympathy a distinct emotion? To test the hypothesis that sympathy is conceptualized as a distinct emotion, we conducted a focused analysis of the nine sympathy emotion pairs. In particular,

Table 1
Overall Means and Standard Deviations for Similarity of Emotion Pairs in the United States and China in Study 1

Emotion pair type	United States	China
Same-valence	4.18 (1.00)	3.68 (.90)
Sympathy-positive	3.11 (1.19)	3.02 (1.07)
Sympathy-negative	2.60 (.97)	2.54 (.89)
Opposite-valence	2.19 (.74)	2.29 (.86)

we tested the hypothesis that sympathy is conceptualized as most similar to love and sadness in both cultures but is still rated as distinct from them. A mixed ANOVA of similarity ratings revealed a significant effect of emotion pair, $F(8, 1656) = 81.40$, $p < .001$, $\eta^2 = .28$, no effect of culture ($F < 1$), and a significant interaction, $F(8, 1656) = 5.35$, $p < .001$, $\eta^2 = .03$. The means by culture and emotion are shown in Figure 1. Planned pairwise analyses confirmed that love ($M = 4.34$, $SD = 1.73$) and sadness ($M = 4.06$, $SD = 1.73$) were rated as no different ($p = .83$) and were significantly more similar to sympathy than all other emotions (all pairwise $ps < .001$). After sadness, there was a precipitous drop in similarity ratings.

To gain more insight into the interaction of culture and emotion, we tested culture effects for each emotion in a multivariate ANOVA. The only emotions for which the two cultures differed in similarity ratings were embarrassment, $F(1, 295) = 26.84$, $p < .001$, $\eta^2 = .08$, and anger, $F(1, 295) = 17.14$, $p < .001$, $\eta^2 = .06$. As shown in Figure 1, Americans rated embarrassment as more similar to sympathy than Chinese. In contrast, Chinese rated anger as more similar to sympathy than Americans.

In sum, the results of Study 1 support the hypothesis that sympathy is conceptualized as a complex and distinct emotion in both the United States and China. In neither culture was sympathy rated as similar to only positive or only negative emotion terms. Instead, sympathy was rated as most similar to one positive emotion (love) and one negative emotion (sadness). Having established that sadness and love are good comparisons in China as well as the United States, the goal of our next study was to gain richer descriptions of experiences of sympathy in order to examine its core appraisals and antecedents.

Study 2: Distinctiveness in Sympathy Experiences

On the basis of our findings in Study 1 as well as previous research, we asked participants to describe actual experiences of sympathy, sadness, or love. We hypothesized that sympathy would have a distinct pattern of experience: In particular, sympathy would be an unpleasant emotion elicited by undeserved suffering and would be associated with motivation to help. Although the results of Study 1 suggest that sympathy is conceptualized as neither strictly positive nor negative (and perhaps more positive), we hypothesized that because it is elicited by suffering and pain (Lishner, Batson, & Huss, 2011), sympathy would be experienced as unpleasant. This is consistent with recent research that showed although prototypical conceptualizations of compassion were pleasant in an American sample, actual experience of compassion in response to suffering was more unpleasant (Condon & Feldman Barrett, 2013). In addition, we predicted sympathy would be

characterized by suffering that is considered undeserved, because previous research found that appraisals of individuals as not responsible for their need (Rudolph et al., 2004) and undeserving of suffering (Feather et al., 2011) predicted sympathy. Finally, we theorized that findings that show sympathy is associated with helping (see Batson, 2011, for a review) would be replicated in China.

We also predicted that the patterns associated with sadness and love would be distinct from sympathy. Consistent with previous research on emotion prototypes, we predicted that sadness would be elicited by personal loss or failure characterized by lack of control (Shaver et al., 1987), and that love would be elicited by positive events characterized by feelings of security, commitment, vulnerability, and gratitude (Campos, Shiota, Keltner, Gonzaga, & Goetz, 2013). Finally, we hypothesized that these patterns would be consistent in both the United States and China.

Method

Participants. Fifty-five American students (49% female; $M_{\text{age}} = 18.65$ years, $SD_{\text{age}} = .84$; 85.4% White) and 68 Chinese students (54.4% female; $M_{\text{age}} = 20.79$ years, $SD_{\text{age}} = 2.14$) participated in the study. Americans completed the study for partial course credit in introductory psychology, and Chinese students were recruited from the broader campus and were paid for their participation.

Procedure. Participants in both cultures arrived in small groups and, after providing informed consent, completed the study on a computer. They were asked to think about a time when they experienced sympathy, sadness, or love, and to describe how they felt, the events that caused them to feel that way, and how they behaved. In addition to providing descriptions for coding, the goal of these questions was for participants to recall the emotional experience in detail in order to complete ratings of the event and their emotional experience.

Materials and measures.

Emotion experience and appraisal ratings. Participants rated the intensity, pleasantness, and unpleasantness of the emotional experience on 5-point scales (from *not at all* to *very much*), and

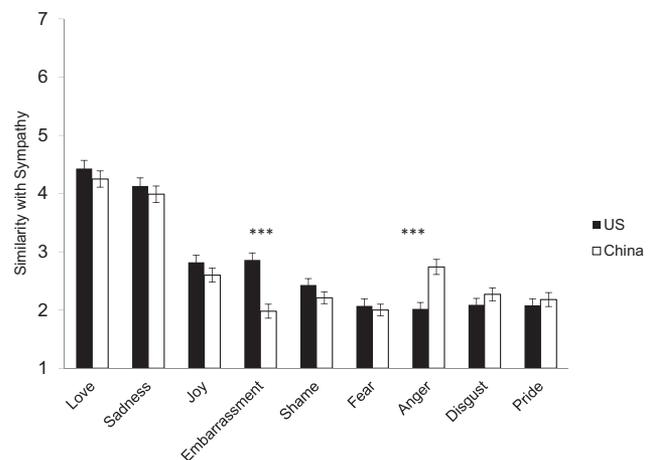


Figure 1. Mean similarity ratings of emotion terms with sympathy in the United States and China in Study 1. *** $p < .001$.

reported how recently the eliciting situation had occurred (*days ago, weeks ago, months ago, or years ago*). In addition, participants rated the event on a series of appraisal dimensions adapted from previous literature (Scherer, 1997; Smith & Ellsworth, 1985) on 5-point scales from *not at all* to *very much* (see the [online supplemental materials](#) for item wording). To measure goal congruence, we averaged how much the event was consistent with participant goals and how much the event was wanted ($\alpha > .81$). To measure fairness, we averaged participant ratings of how just the event was and how unfair the event was (reversed, $\alpha > .74$). Higher numbers indicate the event was rated as more fair.

Coding of emotion narratives. Emotion narratives were edited to remove references to emotions, after which three bilingual coders read over the narratives in their original language and rated them for the degree to which they discussed components of the core appraisal themes using 5-point Likert scales (1 = *not at all*; 5 = *a lot*). For sympathy themes, coders rated the extent to which the participant described taking the perspective of another ($\alpha > .72$), perceiving another in need or pain ($\alpha > .76$), seeing the situation as wrong or unjust ($\alpha > .60$), and wanting to help the other ($\alpha > .68$). For sadness themes, coders rated the extent to which participants expressed a sense of either personal loss or failure ($\alpha > .90$), and expressed feeling powerless, helpless, or not in control ($\alpha > .66$). For love themes, coders rated the extent to which participants expressed that they felt secure and could count on the target person/object of emotion ($\alpha > .75$), made him/herself vulnerable to another person in the story (e.g., sharing intimate information, letting guard down; $\alpha > .83$), expressed increased commitment to target person in the story ($\alpha > .66$), and expressed gratitude for another person ($\alpha > .80$).

Results

Invariance testing. In each of the following studies, we tested for measurement invariance in participant ratings. We did this by first running EFAs in each culture, followed by multigroup confirmatory factor analyses (CFAs) in AMOS. *Metric invariance* was established by testing for equality of latent factor structure and item loadings in the two cultures. *Scalar invariance* was established by testing the equivalence of item intercepts. We evaluated goodness of fit for each model using the comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). Values of CFI more than .95 (or .90), RMSEA values less than .06 (or < .08), and SRMR values less than .08 (or < .10) were considered “good” (Hu & Bentler, 1999) and “acceptable” (MacCallum, Browne, & Sugawara, 1996) fit. Metric or scalar invariance was considered to be supported if a model that assumes that level of invariance showed acceptable fit (Little, 2000).

For Study 2, we ran EFAs of appraisal ratings in each culture and then fit a CFA model with three latent constructs (pleasantness, goal congruence, and fairness) with two indicators for each construct. As shown in the [online supplemental materials](#), the multigroup analysis supported metric invariance, and the model with structural invariance also fit the data well, $\chi^2(21) = 27.23$, $p = .16$, RMSEA = .049, CFI = .987, SRMR = .019. Although both EFAs and CFAs indicated that pleasantness and unpleasantness loaded on the same factor, we report their results separately

because of our interest in sympathy as a potentially complex emotion.

Sympathy appraisal ratings. To control for family-wise error, we ran a MANOVA with culture and emotion as independent factors and the self-reported appraisal scales as dependent variables. Consistent with our distinct emotion hypothesis, there was an overall effect of emotion, $F(12, 234) = 13.02$, $p < .001$, $\eta^2 = .40$, but no effect of culture ($F < 1$) and no interaction ($F < 1$). The subsequent ANOVAs and pairwise comparisons revealed no differences in how recently emotion events occurred ($ps > .23$) or how intensely emotions were originally felt ($ps > .19$). On average, events happened within the last few months ($M = 2.96$, $SE = .10$) and original emotional experience was strong ($M = 4.28$, $SE = .07$). Consistent with predictions, emotions differed significantly in how much they were rated as pleasant, $F(2, 121) = 123.94$, $p < .001$, $\eta^2 = .67$, and unpleasant, $F(2, 121) = 82.96$, $p < .001$, $\eta^2 = .58$. Sympathy was rated low on pleasantness and high on unpleasantness (see Table 2). Consistent with the hypothesis that sympathy is a response to undeserved suffering, there were significant effects of emotion on both goal congruence, $F(2, 121) = 34.31$, $p < .001$, $\eta^2 = .36$, and fairness, $F(2, 121) = 23.58$, $p < .001$, $\eta^2 = .28$. Events in which participants felt sympathy and sadness were rated as low in goal congruence, whereas events in which participants felt love were highly goal congruent (see Table 2). Finally, as predicted, sympathy events were rated as the least fair, followed by sadness and then love (see Table 2).

Does sympathy have a distinct appraisal theme? To control for family-wise error, we ran a MANOVA with culture and emotion as independent variables and coded themes as dependent variables for each emotion. As we summarize ext, analysis of coded themes generally supported our hypotheses (see Table 3 for ANOVA results and means and standard deviations for each emotion).

Sympathy themes. The MANOVA for sympathy themes revealed multivariate effects of emotion, $F(8, 238) = 24.88$, $p < .001$, $\eta^2 = .455$, culture, $F(4, 118) = 6.21$, $p < .001$, $\eta^2 = .174$, and a significant interaction, $F(8, 238) = 2.83$, $p = .005$, $\eta^2 = .087$. Consistent with predictions, sympathy narratives contained more references to other need, perspective taking, and desire to help than sadness or love narratives in both cultures, and descriptions of the event as wrong or unjust were higher for both sympathy and sad narratives (see Table 3). Inspection of the interaction for perspective taking revealed that perspective taking was discussed more in sympathy events than sadness or love events by both Americans ($M_s = 3.73, 1.53, \text{ and } 1.63$, respectively, pairwise $ps < .001$) and Chinese ($M_s = 2.68, 1.21, \text{ and } 1.32$, respectively,

Table 2
Means and Standard Deviations for Appraisal Ratings for Sympathy, Sadness, and Love Experiences in Study 2

Appraisal ratings	Sympathy	Sadness	Love
Pleasant	1.43 _a (.75)	1.29 _a (.73)	4.07 _b (1.18)
Unpleasant	3.83 _a (1.08)	4.07 _a (.94)	1.62 _b (.85)
Goal congruent	1.56 _a (.97)	1.49 _a (.86)	3.15 _b (1.31)
Fair	1.95 _a (.97)	2.61 _b (1.23)	3.66 _c (1.23)

Note. Subscripts indicate mean levels as indicated by pairwise analyses, $p < .01$.

Table 3
Descriptive and ANOVA Results for Coded Appraisal Themes Associated With Sympathy, Sadness, and Love in Study 2

Appraisal themes	Sympathy <i>M</i> (<i>SD</i>)	Sadness <i>M</i> (<i>SD</i>)	Love <i>M</i> (<i>SD</i>)	Emotion (<i>df</i> = 2,121)	Culture (<i>df</i> = 1,121)	Emotion × Culture (<i>df</i> = 2,121)
Sympathy themes						
Perspective taking	3.22_a (1.12)	1.34 _b (.69)	1.48 _b (.67)	$F = 72.38^{***}$ $\eta^2 = .55$	$F = 16.27^{***}$ $\eta^2 = .12$	$F = 3.11^*$ $\eta^2 = .05$
Other need or pain	3.65_a (.83)	1.42 _b (.79)	1.65 _b (1.00)	$F = 80.82^{***}$ $\eta^2 = .57$	$F < 1$	$F < 1$
Wrong	2.17_a (1.12)	2.09_a (.91)	1.06 _b (.23)	$F = 25.76^{***}$ $\eta^2 = .30$	$F = 7.47^{**}$ $\eta^2 = .06$	$F = 6.49^{**}$ $\eta^2 = .10$
Desire to help	2.29_a (1.16)	1.30 _b (.73)	1.72 _b (1.18)	$F = 10.03^{***}$ $\eta^2 = .14$	$F < 1$	$F < 1$
Love themes						
Security	1.05 _a (.22)	1.49 _b (.74)	2.65_c (1.37)	$F = 33.54^{***}$ $\eta^2 = .36$	$F < 1$	$F < 1$
Vulnerability	1.74 (.87)	2.19 (1.38)	1.99 (1.24)	$F = 1.15, ns$ $\eta^2 = .02$	$F < 1$	$F = 4.72^*$ $\eta^2 = .07$
Gratitude	1.14 _a (.40)	1.07 _a (.23)	2.76_b (1.20)	$F = 77.16^{***}$ $\eta^2 = .56$	$F = 2.97, ns$ $\eta^2 = .02$	$F = 1.44, ns$ $\eta^2 = .02$
Commitment	1.67_a (.90)	1.14 _b (.45)	2.02_a (1.01)	$F = 12.48^{***}$ $\eta^2 = .17$	$F < 1$	$F = 1.80, ns$ $\eta^2 = .03$
Sadness themes						
Personal loss or failure	1.63 _a (1.26)	4.13_b (1.18)	1.36 _a (.93)	$F = 84.02^{***}$ $\eta^2 = .58$	$F = 5.81^*$ $\eta^2 = .05$	$F = 2.96, ns$ $\eta^2 = .05$
Lack of control	1.79_a (1.00)	1.81_a (1.04)	1.13 _b (.38)	$F = 10.43^{***}$ $\eta^2 = .15$	$F = 7.36^{**}$ $\eta^2 = .06$	$F = 3.50^*$ $\eta^2 = .06$

Note. Subscripts indicate mean levels as indicated by pairwise analyses, $p < .05$. Bold indicates the highest mean(s) for each coding theme. *df* = degrees of freedom; *ns* = not significant.

* $p < .05$. ** $p < .01$. *** $p < .001$.

pairwise $ps < .001$). The interaction was driven by the fact that Chinese participants mentioned perspective taking slightly less than Americans for sympathy ($p = .002$). There were no cultural differences within sadness or love narratives for perspective taking ($ps > .13$). Finally, Chinese sympathy narratives were more likely to mention that the suffering was wrong than American sympathy narratives ($p = .001$), but there were no differences in sadness or love narratives ($ps > .35$).

Love themes. The overall MANOVA for love themes revealed a significant effect of emotion, $F(8, 238) = 19.20, p < .001, \eta^2 = .392$, no effect of culture, $F(4, 118) = 1.01, p = .41, \eta^2 = .033$, and a significant interaction, $F(8, 238) = 2.55, p = .011, \eta^2 = .079$. Consistent with hypotheses, participants in both cultures were especially likely to mention feelings of security and gratitude in love narratives compared with sympathy and sadness narratives (see Table 3). Love narratives also included more mention of commitment than sadness narratives but not more than sympathy narratives. Contrary to hypotheses, references to vulnerability were not consistent in the two cultures. Inspection of means within culture revealed that Chinese participants were most likely to mention feeling vulnerable in sadness narratives ($M = 2.60$) compared with love and sympathy ($Ms = 1.73$ and 1.73 , omnibus $p = .02$). There were no differences in mention of vulnerability for Americans ($p = .15$).

Sadness themes. Finally, the overall MANOVA for sadness themes revealed significant effects of emotion, $F(2, 242) = 30.48, p < .001, \eta^2 = .335$, culture, $F(2, 120) = 5.48, p = .005, \eta^2 = .084$, and a significant interaction, $F(4, 242) = 3.42, p = .010, \eta^2 = .053$. Consistent with hypotheses, sadness narratives mentioned personal loss or failure more than sympathy and love narratives (see Table 3). In addition, Americans mentioned personal loss in sympathy narratives slightly more than Chinese ($Ms = 2.20$ and 1.05 , respectively, $p = .003$). In contrast to hypotheses, sadness and sympathy narratives did not differ in their mention of a lack of control ($p = .88$), although both were higher than love ($ps < .001$; see Table 3). Analysis of the interaction revealed that American sadness narratives mentioned of lack of control ($M = 2.33, SE = .19$) more than Chinese narratives ($M =$

1.44, $SE = .16; p = .004$), but there were no cultural differences for sympathy or love ($ps > .24$).

Summary. Consistent with the hypothesis that sympathy is a distinct emotional response to undeserved suffering, participants in both cultures judged sympathy antecedents as unwanted and unfair, and rated experiences of sympathy as unpleasant. This was in contrast to love events, which were rated as goal congruent and fair. Sympathy was also distinguished from sadness by lower perceptions of fairness. Analysis of coded themes further revealed that sympathy narratives included the most references to another in need, perspective taking, and desire to help. In contrast, love narratives included feelings of security and gratitude, and sadness narratives included high levels of personal loss or failure. These patterns were largely consistent in the two cultures for sympathy, but Chinese narratives included fewer explicit mentions of perspective taking and more mentions that the situation was wrong.

Discussion of Studies 1 and 2

Together, these two studies provide evidence that sympathy is a distinct emotion that is conceptualized similarly, elicited by similar events, and has similar appraisal themes in the United States and China. In both cultures, sympathy was an unpleasant emotion felt in response to other need or suffering that was judged to be unfair, involved perspective taking, and motivated a desire to help. In addition, cultural differences emerged. Chinese participants rated sympathy as more similar to anger than Americans (Study 1), mentioned suffering was wrong more often, and described perspective taking less than Americans in their sympathy narratives (Study 2).

Furthermore, Study 2 provides insight into the complexity of sympathy. In Study 1, we hypothesized and found that sympathy would be considered similar to both negative and positive emotions, rather than being classified as just one or the other. We theorize the complexity of sympathy comes from the fact that it is experienced in unpleasant situations but that it motivates cooperative and socially valued behavior. Consistent with this explanation, we found in Study 2 that sympathy was experienced as

unpleasant in both cultures but was also associated with increased commitment to others and a desire to help.

There are questions raised by Studies 1 and 2 that we aimed to answer in Studies 3 and 4. For example, is sympathy the typical—or most common—response to suffering in both cultures? Do individuals in both cultures feel sympathy for all individuals equally, or are there cultural differences in who elicits feelings of sympathy? Why was sympathy more closely associated with anger by Chinese participants, and why was it more closely associated with embarrassment in the United States? And finally, are there cultural differences in interpretations of suffering and subsequent tendencies to help or punish those who are suffering? To examine these questions, we took an antecedent-oriented approach that allowed us to examine cultural variation in appraisals and emotional as well as behavioral tendencies.

Study 3: Idiographic Responses to Suffering

In Study 3, we took an antecedent-oriented and idiographic approach. We asked participants to describe a time when they witnessed either a friend or a stranger suffering and had them report their emotions, attributions, and behavioral tendencies. Consistent with our findings in Study 2, we predicted that suffering would be associated with high levels of sympathy and a desire to help, and we hypothesized that as in-group members, friends would elicit more sympathy and help than strangers (Cialdini et al., 1997). We also predicted cultural differences in emotional and behavioral responses. As outgroup members, we predicted that Chinese participants would respond to strangers with less sympathy and help than Americans (Atkins et al., 2016). Consistent with research showing that individuals in East Asian cultures avoid seeking social support out of a concern for relational harmony (Kim, Sherman, Ko, & Taylor, 2006), we hypothesized that Chinese would respond with more personal distress when exposed to suffering and would be more likely to want to avoid the suffering individual. We hypothesized this effect might be stronger for friends than strangers.

Finally, we had reason to believe that interpretations of suffering would vary by culture. Previous research on cultural differences in attribution and explanation of events (e.g., Morris & Peng, 1994; Nisbett, Peng, Choi, & Norenzayan, 2001) suggest that Chinese individuals might be more likely to attribute suffering to situational factors than to individuals. On the other hand, recent research on repressive suffering construal (Sullivan et al., 2012, 2016) suggests that Chinese may be more likely than Americans to see suffering as deserved and to see individuals as responsible for their own suffering. Likewise, they may be more likely to want to punish suffering individuals than Americans.

Method

Participants. Sixty-three American students (60.3% female; $M_{\text{age}} = 19.32$ years, $SD_{\text{age}} = 1.08$; 93.6% White) and 64 Chinese students (71.9% female; $M_{\text{age}} = 19.21$ years, $SD_{\text{age}} = 1.08$) were randomly assigned to either the friend or stranger condition. All were enrolled in psychology classes and received partial course credit for their participation.

Procedure. Participants completed the experiment on a computer in a campus computer laboratory in their own language. After providing informed consent, participants described an event

in which either a good friend or a stranger suffered. They responded to open-ended prompts to describe what happened in the event, what caused the suffering, what they thought and felt, and what they did in response. They then rated their emotions, appraisals, and behavioral tendencies in the event, described below.

Materials and measures.

Event coding. Event narratives in both cultures were coded by the first author and a bilingual research assistant. We first read all the descriptions and identified the following broad types of suffering: physical injury or disease, grieving due to loss of a loved one, relationship issues (e.g., breakups, disagreements with family, feeling left out by friends), general emotional distress (e.g., depression, stress), and academic failure. After identifying these types, we independently coded the events and then resolved disagreements by discussion. After coding, some event types had very low frequencies (see the [online supplemental materials](#)), so we condensed the suffering types to physical suffering versus emotional suffering.

Emotion ratings. As in Study 2, participants indicated how recently the eliciting situation occurred and rated their emotional experience on 5-point scales from *not at all* to *extremely* for a variety of emotion terms (see the [online supplemental materials](#)). EFAs revealed that emotion terms loaded differently across the two cultures, probably because there were close synonyms that were difficult to translate precisely (e.g., *distressed*, *upset*, *worried*, *concerned*). In particular, *compassion* and *pity* loaded on the same factor as *sympathy* in China but not in the United States. Based on our theoretical interest as well loadings in the two cultures, we retained single item measures for *sympathy*, *love*, and *sad* and a two-item measure for *troubled and disturbed* ($\alpha > .75$).

Attribution and deservingness ratings. Participants rated events on a series of appraisal dimensions on 5-point scales (from *not at all* to *very much*). EFAs revealed distinct factors for severity of suffering, and attribution to the suffering target, to other individuals, to society, and to circumstance (see the [online supplemental materials](#) for wording). Ratings of deservingness loaded on the same factor as attribution to the suffering target, but the final model fit better with it as a separate item. The final CFA model had latent factors for attribution to the target (two items, $\alpha < .91$) and attribution to another individual (two items, $\alpha < .96$). Severity of suffering, deservingness, attribution to society, and attribution to circumstance were each represented by a single item. As shown in the [online supplemental materials](#), the multigroup analysis supported metric invariance, and the model with structural invariance also had acceptable fit according to CFI and SRMR but marginal fit for RMSEA, $\chi^2(45) = 82.51$, $p = .001$, RMSEA = .082, CFI = .945, SRMR = .0453.

Behavioral tendencies. Participants rated the extent to which they engaged in or wanted to engage in a variety of behaviors on a 5-point scale from *not at all* to *very much*. EFAs and CFAs supported three latent factors: Help Tendencies (e.g., “I wanted to help this person,” “I wanted to take care of this person”); four items, $\alpha < .88$), Avoidance Tendencies (e.g., “I tried to put the situation out of my mind”); three items, $\alpha < .71$), and Punishment Tendencies (e.g., “I wanted to yell, or speak harshly to this person”); two items, $\alpha < .83$). A multigroup CFA reflecting full metric and scalar invariance had acceptable fit, $\chi^2(61) = 91.20$, $p = .007$, RMSEA = .063, CFI = .946, SRMR = .0638, supporting comparisons across the two cultures.

Closeness. Participants rated their closeness to the target using the Inclusion of Other in Self (IOS) scale (Aron et al., 1992).

Results

Preliminary analyses. Analysis of IOS ratings confirmed that participants in both the United States and China felt more close to friends ($M = 4.42, SE = .19$) than strangers ($M = 1.95, SE = .19$), $F(1, 125) = 86.51, p < .001, \eta^2 = .42$. Examination of coded event types revealed that Americans and Chinese were equally likely to describe strangers who suffered physically (48% and 42%, respectively) and emotionally (52% and 58%, respectively), $\chi^2(1) = .23, p = .63$. However, Americans were less likely than Chinese to describe friends who suffered physically (9% vs. 41%, respectively) and more likely to describe friends who suffered emotionally (91% vs. 59%, respectively), $\chi^2(1) = 8.72, p = .003$. Analysis of recency ratings revealed that Chinese described events that happened, on average, several weeks ago ($M = 2.05, SE = .13$), whereas Americans described events that happened, on average, several months ago ($M = 2.97, SE = .13$), $F(1, 126) = 24.78, p < .001, \eta^2 = .17$. Severity of suffering was high overall ($M = 3.90, SE = .12$) and did not differ by culture or relationship type.

In the following analyses, we ran MANOVAs with culture and relationship type predicting each class of dependent variable to control for multiple comparisons, followed by more detailed analyses to understand the patterns of results. All analyses controlled for event recency and severity.

Does sympathy for suffering differ by relationship or culture? The MANOVA revealed a significant multivariate effect of relationship, $F(4, 114) = 3.91, p = .005, \eta^2 = .121$, no effect of culture, $F(4, 114) = 1.72, p = .15, \eta^2 = .06$, and no interaction, $F(4, 114) = 1.32, p = .27, \eta^2 = .04$. Subsequent ANOVAs revealed a significant effect of relationship on love, $F(1, 123) = 13.03, p < .001, \eta^2 = .10$, but no other effects. Consistent with hypotheses, inspection of means revealed participants from both cultures felt very sympathetic ($M = 4.21, SE = .13$) and moderately sad ($M = 3.46, SE = .11$) and troubled ($M = 2.50, SE = .14$) in response to suffering. Contrary to hypotheses, there was no effect of relationship on sympathy, but participants in both cultures reported more love for friends ($M = 3.01, SE = .15$) than strangers ($M = 2.15, SE = .16$).

Do behavioral responses vary by culture? The MANOVA showed significant multivariate effects of culture, $F(3, 115) = 8.58, p < .001, \eta^2 = .18$, and relationship, $F(3, 115) = 11.85, p < .001, \eta^2 = .236$, but no interaction, $F(3, 115) = 1.30, p = .28, \eta^2 = .033$. Subsequent ANOVAs revealed culture main effects for desire to help, $F(1, 117) = 9.96, p = .002, \eta^2 = .078$, desire to avoid, $F(1, 117) = 14.85, p < .001, \eta^2 = .11$, and desire to punish, $F(1, 117) = 7.47, p = .007, \eta^2 = .060$. As shown in Figure 2, Chinese reported less desire to help, more desire to avoid, and more desire punish suffering individuals than Americans. In addition, there were significant effects of relationship on desire to help, $F(1, 117) = 30.47, p < .001, \eta^2 = .21$, and avoid, $F(1, 117) = 4.06, p = .046, \eta^2 = .034$, but not punish ($F < 1$). Participants in both cultures reported more desire to help friends than strangers ($M_s = 4.05$ vs. 3.08) and less desire to avoid friends than strangers ($M_s = 2.45$ vs. 2.81). The interaction of culture and relationship

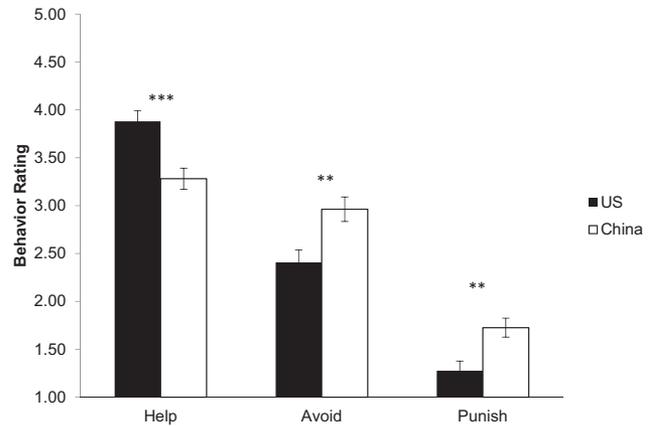


Figure 2. Behavioral responses to suffering in United States and China in Study 3. Error bars indicate standard errors. ** $p < .01$. *** $p < .001$.

for desire to punish was marginal, $F(1, 117) = 3.68, p = .057, \eta^2 = .031$, and the others were not significant ($F_s < 1$).

Do interpretations of suffering differ by culture? The MANOVA of attribution ratings showed significant multivariate effects of culture, $F(5, 113) = 6.96, p < .001, \eta^2 = .236$, relationship, $F(5, 113) = 3.30, p = .008, \eta^2 = .127$, and a marginal interaction of culture and relationship, $F(5, 113) = 2.05, p = .078, \eta^2 = .083$. Follow-up ANOVAs revealed cultural differences for attributions to the target individual, $F(1, 117) = 23.64, p < .001, \eta^2 = .168$, and attributions to society, $F(1, 117) = 6.61, p = .027, \eta^2 = .041$, but not for attributions to another individual, $F(1, 117) = 2.50, p = .116, \eta^2 = .021$, or circumstance ($F < 1$). The only significant relationship effect was for attributions to society, $F(1, 117) = 8.44, p = .004, \eta^2 = .067$ (all other $F_s < 1.10$). The interaction of culture and relationship was only significant for attributions to other individuals, $F(1, 117) = 4.08, p = .046, \eta^2 = .034$, and marginal for attributions to the target, $F(1, 117) = 3.10, p = .081, \eta^2 = .026$ (other $F_s < 1$). Analyses of deservingness ratings revealed a main effect of culture, $F(1, 117) = 20.18, p < .001, \eta^2 = .147$, a marginal effect of relationship, $F(1, 117) = 2.95, p = .089, \eta^2 = .02$, and a significant interaction, $F(1, 117) = 4.01, p = .047, \eta^2 = .033$.

As shown in Figure 3, both Chinese and Americans attributed suffering most to circumstances and to individuals other than the target. In addition, Chinese attributed more responsibility to the suffering individual and to society than did Americans. Inspection of relationship effects showed that strangers' suffering was more likely to be attributed to society ($M = 2.20, SE = .16$) than friends' suffering ($M = 1.60, SE = .16$). In addition, Chinese rated suffering as more deserved ($M = 2.21, SE = .14$) than Americans ($M = 1.37, SE = .13$), and Chinese rated strangers as more deserving of suffering than friends ($M_s = 2.42$ vs. $1.79, p = .023$), but there were no such differences for Americans ($M_s = 1.34$ vs. $1.32, p = .90$).

Discussion of Study 3

In sum, both American and Chinese participants responded to others' suffering with high levels of sympathy and a desire to help. However, cultural differences emerged—Chinese were more likely

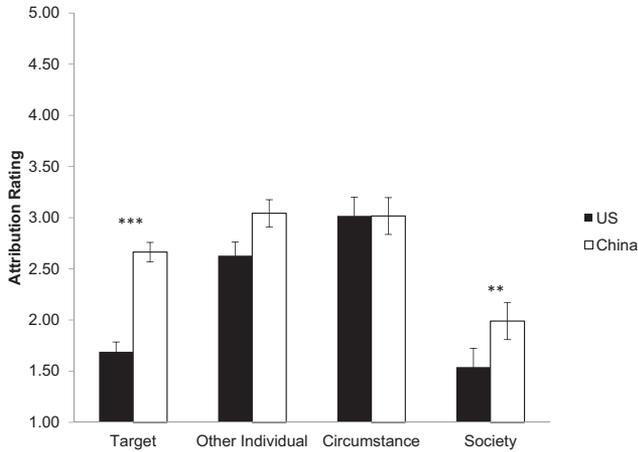


Figure 3. Attribution of responsibility for suffering in United States and China in Study 3. Error bars indicate standard errors. ** $p < .01$. *** $p < .001$.

to describe physical suffering, whereas Americans were more likely to describe emotional suffering. In addition, Americans reported slightly more desire to help suffering individuals than Chinese, whereas Chinese reported wanting to avoid and punish them slightly more than Americans. Finally, Chinese attributed more responsibility to the suffering individual and saw suffering as slightly more deserved than did Americans.

Contrary to previous research and hypotheses, there were no differences in the amount of sympathy felt for friends and strangers, although friends elicited more love and were more likely to receive help and less likely to be avoided in both cultures. The only cultural differences by relationship that emerged were that Chinese perceived strangers as slightly more deserving of their suffering and wanted to punish them slightly more than Americans.

Study 4: Responses to Suffering in Controlled Scenarios

The strength of Study 3 is that participants reported actual memories of events in their lives, but it is possible that the cultural differences in responding that we observed were due to differences in the suffering events themselves rather than interpretation of those events. In Study 4, therefore, participants in both cultures responded to a controlled set of suffering events adapted from Study 3.

Consistent with our previous findings and theoretical approach, we predicted that sympathy would be felt strongly in response to suffering, that participants would want to help the suffering individual, and that sympathy would be stronger for friends than strangers. In addition, we hypothesized that the cultural differences found in earlier studies would emerge again. Namely, we hypothesized that Chinese participants would see the suffering individual as more responsible and deserving of suffering, and would want to help them less and punish them more than American participants.

Method

Participants. Ninety-one Americans students (56% female; $M_{age} = 19.14$ years, $SD_{age} = 1.22$; 88% White) and 93 Chinese

students (53% female; $M_{age} = 13.83$ years, $SD_{age} = 3.50$) participated in the study. Americans participated in exchange for partial course credit in introductory psychology, and Chinese were recruited from the broader campus population and paid for their participation.

Procedure. Participants were brought into a laboratory and, after providing informed consent, completed the experiment on a computer. Participants were presented with three scenarios in which either a friend or stranger was suffering, thus creating a 2 (culture/between-subjects) \times 2 (relationship/between-subjects) \times 3 (scenario/within-subject) mixed design.¹ Participants read each scenario and were asked to imagine how they would feel and behave in the situation, and then rated the emotions, appraisals, and behavioral tendencies they would feel in the event.

Materials and measures.

Scenarios. Participants responded to three scenarios in which either a friend or stranger was suffering or in need: a romantic rejection situation, an academic failure situation, and a physical injury situation. Scenarios were presented in random order. The scenarios were chosen to represent the variety of physical and emotional suffering described in both cultures Study 3. Event descriptions were adapted from Study 3 by Chinese research assistants studying in the United States, and were pilot tested to be applicable to friends and strangers and plausible to members of both cultures (see the [online supplemental materials](#) for event wording).

Emotion ratings. Participants rated how they would feel in each scenario on 5-point scales from *not at all* to *extremely* on a revised list of emotion terms. EFAs revealed three emotion factors in both cultures: (a) sympathy, concern for the person, and pity; (b) love, warm, and caring; and (c) distressed, overwhelmed. We also retained the one-item measure “angry at the person.” During CFAs, *pity* was dropped due to problems fitting the U.S. model. Final reliabilities for the scales were acceptable in both cultures ($\alpha > .66$). As shown in the [online supplemental tables](#), the final multigroup model with scalar invariance had acceptable fit, $\chi^2(41) = 209.36$, $p < .001$, RMSEA = .074, CFI = .934, SRMR = .0327.

Attribution and deservingness ratings. Attribution items were the same as those used in Study 3. EFAs revealed a severity factor (three items, $\alpha > .87$), attribution to the suffering target (two items, $\alpha > .84$), to other individuals (two items, $\alpha > .89$). As in Study 3, deservingness of suffering, attribution to society, and attribution to circumstance were retained as single-item measures. The multigroup analysis with scalar invariance had acceptable fit, $\chi^2(57) = 281.16$, $p < .001$, RMSEA = .072, CFI = .937, SRMR = .0359.

Behavioral tendencies. Participants rated behavior using the same scale as Study 3. EFA in both cultures revealed factors for desire to help (four items, $\alpha > .92$), desire to avoid (three items, $\alpha > .72$), and desire to punish (two items, $\alpha > .61$). Fitting of the CFA model and inspection of localized areas of strain suggested that *desire to escape* cross-loaded negatively on the latent

¹ All participants also responded to a final situation in which they encountered a beggar asking for money. Because this scenario was only relevant to strangers, we do not present the results here but present them in our [online supplemental materials](#). Overall, the pattern of results is consistent with those of the other scenarios.

helping variable and positively on the latent punishment variable, so these were included. The final models also included correlated residuals between *stay* and *help* as well as between *help* and *take care*. The multigroup analysis with scalar invariance had good fit, $\chi^2(56) = 184.316$, $p < .001$, RMSEA = .055, CFI = .965, SRMR = .0294.

Results

Due to the multilevel nature of the data, we ran multilevel regressions with culture (United States coded as -1 and China as $+1$) and relationship (stranger coded as -1 and friend as $+1$) as Level 2 predictors and event as a Level 1 predictor (test failure as -1 , romantic rejection as 0 , and soccer injury as $+1$). We grand mean centered all continuous predictors and ran separate regressions for each of the 12 dependent variables. To control for multiple comparisons, we used a Bonferroni correction and set our alpha level at $p = .05/12 = .004$. For readability, we report event effects only if they shift cultural patterns.

Manipulation check. Analyses confirmed that all events were rated with a moderate to high level of suffering. Severity of suffering differed by event ($b = .53$, $SE = .03$), $t(370.99) = 15.54$, $p < .001$, by culture ($b = .23$, $SE = .05$), $t(185.13) = 5.03$, $p < .001$, and there was an interaction of event and culture ($b = -.19$, $SE = .03$), $t(370.99) = -5.51$, $p < .001$. There was no effect of relationship ($b = -.05$, $SE = .05$), $t(185.13) = -1.15$, $p = .25$, and no other significant interactions ($ps > .60$). Examination of means revealed that the soccer injury was rated highest in suffering by both Chinese and Americans ($M_s = 4.21$ and 4.28 , respectively, pairwise $p = .92$). The romantic rejection was rated higher in suffering by Chinese participants than Americans ($M_s = 3.74$ and 2.93 , respectively, $p < .001$), as was test failure ($M_s = 3.52$ and 2.85 , respectively, $p < .001$). Due to these variations, all subsequent analyses include degree of suffering as a control variable.

Do emotional responses to suffering differ? We predicted high levels of sympathy overall but predicted that friends would elicit more sympathy than strangers. Contrary to hypotheses, for sympathy, there was a significant effect of culture ($b = -.26$, $SE = 0.04$), $t(189.42) = -5.76$, $p < .001$, and a nonsignificant three-way interaction of culture, event, and relationship ($b = .07$, $SE = 0.04$), $t(357.52) = 1.99$, $p = .048$ (no other effects, $ps > .23$). Overall, Americans reported more sympathy ($M = 3.94$, $SE = .07$) than Chinese ($M = 3.61$, $SE = .07$).

We also tested whether there were cultural differences in distress or anger toward the suffering individual. For distress, analyses revealed no effect of culture ($p = .52$), no effect of relationship ($b = .09$, $SE = 0.05$), $t(179.30) = 1.84$, $p = .067$, and no interactions ($ps > .34$). For anger, there was an effect of culture ($b = .12$, $SE = 0.04$), $t(188.16) = 3.51$, $p < .001$, and nonsignificant effect of relationship ($b = -.07$, $SE = 0.03$), $t(176.70) = -2.13$, $p = .034$, and no interactions ($ps > .07$). Overall, participants in both cultures experienced moderate distress ($M = 1.92$, $SD = .94$) and Chinese participants reported slightly more anger ($M = 1.46$, $SE = .05$) than Americans ($M = 1.18$, $SE = .05$) toward suffering individuals.

Do behavioral tendencies vary? Our hypothesis that there would be cultural differences in desire to help and punish suffering individuals was supported. For desire to help, there was an effect of culture ($b = -.23$, $SE = 0.05$), $t(189.26) = -4.28$, $p < .001$,

an effect of relationship ($b = .51$, $SE = 0.05$), $t(179.63) = 9.87$, $p < .001$, and no interactions ($ps > .15$). For punishment, there was an effect of culture ($b = .08$, $SE = 0.03$), $t(191.41) = 2.89$, $p = .004$, no effect of relationship ($b = -.04$, $p = .18$), and no interactions ($ps > .33$). For avoidance, there was no effect of relationship ($b = -.14$, $SE = 0.05$), $t(178.85) = -2.59$, $p = .01$, no effect of culture ($p > .39$), and no interaction of culture and relationship ($b = .10$, $SE = 0.05$), $t(178.33) = 1.86$, $p = .07$.

Chinese participants reported less desire to help ($M = 2.83$, $SE = .08$) than Americans ($M = 3.10$, $SE = .08$), and friends elicited more help ($M = 3.46$, $SE = .08$) than strangers ($M = 2.48$, $SE = .08$). Although overall desire to punish was low in both cultures, Chinese ($M = 1.33$, $SE = .04$) reported wanting to punish suffering individuals slightly more than Americans ($M = 1.15$, $SE = .04$). Finally, participants in both the United States ($M = 2.53$, $SE = .08$) and China ($M = 2.45$, $SE = .08$) reported moderate levels of wanting to avoid suffering individuals.

Do perceptions of suffering differ? We hypothesized that Chinese would see suffering as more deserved and perceive suffering individuals as more responsible than Americans. Both of these hypotheses were supported. Ratings of deservingness differed by culture ($b = .54$, $SE = 0.04$), $t(190.91) = 12.25$, $p < .001$, and by event ($b = -.47$, $SE = .05$), $t(450.24) = -10.32$, $p < .001$, and there was an interaction of event and culture ($b = -.21$, $SE = .04$), $t(373.80) = -5.22$, $p < .001$. As shown in Figure 4, Chinese consistently rated suffering as more deserved compared with Americans. Inspection of the interaction showed this effect was strongest for the test failure scenario and weakest for the soccer injury.

Attributions of responsibility to the suffering individual differed by culture ($b = .45$, $SE = 0.04$), $t(192.14) = 10.14$, $p < .001$, and there was an interaction of event and culture ($b = .24$, $SE = 0.04$), $t(376.70) = 5.56$, $p < .001$. There was also a nonsignificant effect of relationship ($b = -.11$, $SE = 0.04$), $t(180.47) = -2.55$, $p = .012$. Consistent with hypotheses, Chinese attributed more responsibility to suffering individuals ($M = 3.42$, $SE = .06$) than Americans ($M = 2.43$, $SE = .06$). Examination of the Culture \times Event interaction revealed that the cultural difference was slightly smaller in the physical injury scenario than it was in the romantic rejection and test scenario.

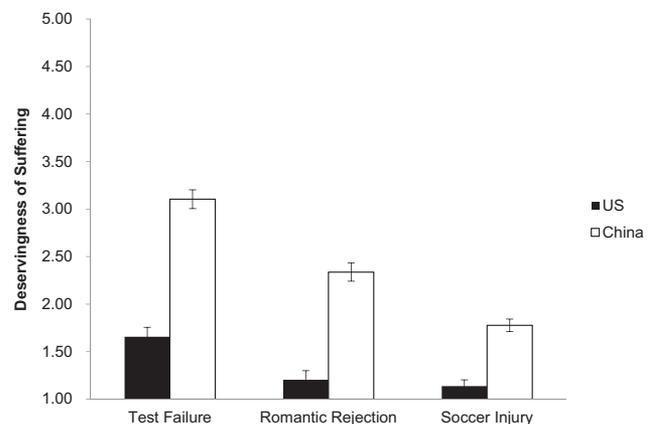


Figure 4. Perceived deservingness of suffering in United States and China across situations in Study 4. Error bars indicate standard errors.

Analyses revealed no significant effects on attribution to other individuals ($ps > .006$) or to circumstance ($ps > .006$). For attribution to society, the only significant effect was an interaction of event and culture ($b = .20$, $SE = .04$), $t(374.46) = 4.56$, $p < .001$ (all other $ps > .06$). Follow-up analyses revealed that Americans attributed less to society than Chinese in the soccer injury scenario ($M_s = 1.33$ and 2.21 , respectively, $p < .001$), but Americans attributed more to society than Chinese in the romantic rejection scenario ($M_s = 1.93$ and 1.46 , $p = .001$). There was no difference in attribution to society in the test failure scenario ($M_s = 1.95$ and 1.81 , $p = .38$). For more detailed analyses of these patterns, see the [online supplemental materials](#).

Discussion of Study 4

The pattern of results in Study 4 largely replicated the pattern in Study 3. Americans and Chinese reported high levels of sympathy and wanted to help the individual who was suffering. In addition, cultural differences emerged. Chinese reported slightly less sympathy and more anger toward the suffering individual, as well as less desire to help and more desire to punish compared with Americans. Consistent with these emotional and behavioral patterns, Chinese rated suffering as more deserved and attributed more responsibility to suffering individuals than did Americans.

General Discussion

The present research provides an in-depth examination of experiences of sympathy and responses to suffering in a non-Western culture and provides evidence that sympathy is a distinct emotion that responds to suffering in others and motivates desire to help. In both the United States and China, sympathy was conceptualized (Study 1) and experienced (Study 2) as distinct from sadness and love. Sympathy was experienced as unpleasant and was elicited by another's suffering that was unwanted and undeserved (Study 2). Overwhelmingly, American and Chinese participants reported feeling sympathy and desire to help in response to the physical and emotional suffering of both friends and strangers (Studies 3 and 4). In addition, the present studies reveal cultural variation in responses to suffering. Although participants in both cultures reported strong feelings of sympathy, Chinese participants perceived individuals as more responsible for and deserving of their suffering and wanted to help them less and punish them slightly more than Americans (Studies 3 and 4).

Sympathy as a Distinct Emotion

The current findings contribute to a growing body of evidence that humans have a distinct affective experience whose primary function is to facilitate cooperation and caring for those who suffer (Goetz et al., 2010). The studies do this in two ways: first, by comparing sympathy directly with the related states of love and sadness, and second, by examining sympathy experiences in individuals from two cultures with divergent philosophical, social, and political histories and cultural values. In contrast to arguments that subsume sympathy and compassion as variants of love (Sprecher & Fehr, 2005) or blends of love and sadness (Shaver et al., 1987), sympathy had distinct antecedents and appraisal themes from love and sadness in both the United States and China. Sympathy was

elicited by other's unwanted physical and emotional suffering and involved high levels of perspective taking and desire to help. Furthermore, when participants recalled events in their own lives (Study 3) or responded to standardized events (Study 4) in which others suffered, both Chinese and Americans reported high levels of sympathy and a desire to help.

The current findings also suggest that sympathy is a complex emotion that is neither strictly positive nor negative. Conceptually, participants in both cultures rated sympathy as slightly more similar to positive than negative emotions but did not clearly group it with strictly positive or negative emotions. When describing an actual experience of sympathy, however, participants overwhelmingly rated it as unpleasant. This conceptual-experiential distinction is consistent with other research finding that prototypical conceptions of the term *compassion* were pleasant but actual experiences of compassion in response to suffering were mixed for Americans (Condon & Feldman Barrett, 2013). One possible reason for differences between conceptions and actual experience of these emotions could be the prosocial outcomes that result from acting on sympathy and compassion. Although elicitation of sympathy may be unpleasant, acting upon it may feel pleasant and have a psychological reward.

The present work also reinforces the notion that the terms *sympathy*, *compassion*, and *pity* have slightly different connotations in English. Americans' experience of these terms in Study 3 did not cohere well, whereas Chinese ratings of their translations did. Although this finding is consistent with previous research showing these terms have subtle differences in English (Shaver et al., 1987), we suspect these are variations on a theme rather than distinct emotions.

Cultural Variation in Responding to Suffering

In addition to the similarities we observed, there were cultural differences in attributions of suffering as well as behavioral responses to suffering individuals. In both their own memories and in response to standardized event descriptions, Chinese participants attributed more responsibility and deservingness to people who were suffering than American participants. Chinese participants also reported slightly less desire to help and slightly more desire to punish suffering individuals than Americans. There was no moderation of these cultural patterns by relationship type, though friends received more help overall. This is inconsistent with previous research that found East Asians to be less responsive to outgroup members compared with Americans (Atkins et al., 2016) and more responsive to in-group members (Ma-Kellams & Blascovich, 2012). One explanation for the discrepancy is that our "friend" condition failed to invoke an in-group relationship for Chinese participants. This is possible in the hypothetical situations in Study 4 but unlikely in Study 3, in which participants remembered real situations. Furthermore, our manipulation check in Study 3 indicated a clear difference in closeness by relationship but not culture.

One potential explanation for the observed cultural differences may be in broad-based cultural variation in perception and attribution of causality. The attribution patterns in the present studies are consistent with holistic versus analytic thought (e.g., Choi, Dalal, Kim-Prieto, & Park, 2003; Nisbett et al., 2001), in that Chinese participants in our studies attributed to a broader array of

potential causal mechanisms than Americans: Whereas Americans attributed suffering almost exclusively to other individuals and circumstance, Chinese also held the suffering individual and society as responsible. A holistic approach may have caused Chinese individuals to consider more factors relevant in explanation of suffering.

Another possible explanation is more particular to interpretations of suffering. Research by Sullivan and colleagues (2012, 2016) on repressive suffering construal has shown that collectivistic values are associated with seeing suffering as the result of social norm violations and suffering as functional for keeping individuals in line with society's rules. Consistent with this research, Chinese participants in our studies saw suffering as more deserved than Americans, reported more anger toward suffering individuals, and reported slightly stronger desire to punish suffering individuals. In Study 3, Chinese participants also reported that society was more responsible for suffering than did Americans—suggesting that they see suffering as implicating not just an individual but society as a whole.

Finally, the observed cultural patterns may be the result of differences in beliefs about self-presentation of emotion. People in individualistic cultures are more likely to self-enhance (Heine & Hamamura, 2007) and overestimate their generosity (Balcetis, Dunning, & Miller, 2008) than those in collectivist cultures. Thus, it is possible that Americans in the present studies overreported their desire to help others and underreported their desire to escape and punish suffering individuals. In addition, Americans reported higher levels of sympathy and slightly lower levels of anger than Chinese participants in Study 4. Given research showing that Americans avoid negative affect, particularly in relation to sympathy (Koopmann-Holm & Tsai, 2014), it is possible that Chinese participants may have been more accurate in their self-reports than Americans. However, research has similarly suggested that individuals with interdependent self-construals may find suffering threatening to social harmony (e.g., Kim et al., 2006). This would suggest that suffering would elicit more negative emotion for those with interdependent self-construals. Future research that examines physiological and behavioral correlates of sympathy in response to suffering will help to clarify whether the patterns observed here are replicated in behavior.

Implications for Experience of Sympathy

What do the cultural differences we found suggest for experience of sympathy in different cultural contexts? Previous research conducted largely in Western cultural contexts suggests that attribution of causality is reliably related to elicitation of sympathy (Rudolph et al., 2004). Attribution theory suggests that if thinking someone is responsible for his or her suffering is more frequent in a culture, then sympathy will occur less often or less intensely.² However, the present findings suggest that Chinese neither experienced sympathy less often nor less intensely. Instead, Chinese participants simultaneously acknowledged a wide variety of causal factors for suffering and also experienced intense sympathy, suggesting that attribution of responsibility plays less of a role in experience of sympathy in a Chinese cultural context. This is further supported by subsequent exploratory analyses showing that experience of sympathy and attributions of responsibility to the suffering individual were more weakly correlated for Chinese

individuals than Americans in Study 3 ($r_s = -.07$ and $-.28$, respectively) and in Study 4 ($r_s = -.06$ and $-.30$, respectively). Instead, sympathy in a Chinese cultural context may relate more with the degree to which an individual appears to be within group norms (i.e., was the suffering the result of conforming on nonconforming behavior?). This is an area for future work.

Another interesting possibility is to consider work on emotional complexity that shows that individuals from China and other East Asian cultures report more co-occurrence of positive and negative emotions than individuals from Western cultural contexts (Miyamoto, Uchida, & Ellsworth, 2010; Sims et al., 2015). For example, Shiota, Campos, Gonzaga, Keltner, and Peng (2010) found that Asian American participants were more likely to report feeling sympathy and anger simultaneously for a relationship partner than European American participants. Consistent with their co-occurrence, Chinese rated sympathy and anger as more similar than did Americans in Study 1, and further analyses revealed that experience of sympathy for and anger at the suffering individual was negatively correlated for American participants ($r = -.26$, $p < .001$) but not for Chinese participants in Study 4 ($r = -.08$, $p = .13$). It is possible that Chinese participants in the present studies were more aware of and tolerant of the complex causal forces and emotions at play in suffering situations. In contrast, it is possible that Americans polarized their responses to downplay potential contradiction in their emotional experience and cognitions about the situation to be primarily sympathy oriented in the current studies.

Limitations and Future Directions

The present work is limited in that it is self-report and the methods originated in research conducted in Western cultural contexts. We therefore cannot separate whether the patterns observed reflect differences in emotional experience or differences in beliefs about sympathy and suffering. As cultural researchers, it is our bias to see cultural differences in beliefs about emotion as “real,” but it would nevertheless be interesting for future work to examine at what point in the emotion process these differences emerge. We suspect that they would be seen in early automatic and unconscious deployment of attention and emotional responsiveness to others, as well as conscious decisions about expression of sympathy and decisions whether or not to engage in helping behavior. In addition, because our methods sought to test appraisal themes and dimensions that were derived from previous research in Western contexts, the present studies favored finding similarities over differences. Future work that seeks to engage in emic analyses of sympathy could identify additional themes and differences.

In conclusion, the present research provides strong evidence that individuals from a non-Western culture experience intense feelings of sympathy when others are suffering and in need. Sympathy was conceptualized and experienced as unique from love and sadness, was experienced as unpleasant, and motivated help. In addition, our research reveals important cultural differences in attribution of responsibility and deservingness of suffering that may contribute to downstream behavioral consequences for helping and punishment. Future research is needed to continue to examine the degree

² Our thanks to an anonymous reviewer for making this suggestion.

to which culture shifts experience and expression of this supremely social emotion.

References

- Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of Other in the Self Scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, *63*, 596–612. <http://dx.doi.org/10.1037/0022-3514.63.4.596>
- Atkins, D., Uskul, A. K., & Cooper, N. R. (2016). Culture shapes empathic responses to physical and social pain. *Emotion*, *16*, 587–601. <http://dx.doi.org/10.1037/emo0000162>
- Balacetis, E., Dunning, D., & Miller, R. L. (2008). Do collectivists know themselves better than individualists? Cross-cultural studies of the holier than thou phenomenon. *Journal of Personality and Social Psychology*, *95*, 922–933. <http://dx.doi.org/10.1037/a0013195>
- Batson, C. D. (2011). *Altruism in humans*. New York, NY: Oxford University Press.
- Batson, C. D., Batson, J. G., Griffitt, C. A., Barrientos, S., Brandt, J. R., Sprengelmeyer, P., & Bayly, M. J. (1989). Negative-state relief and the empathy—Altruism hypothesis. *Journal of Personality and Social Psychology*, *56*, 922–933. <http://dx.doi.org/10.1037/0022-3514.56.6.922>
- Batson, C. D., Duncan, B. D., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology*, *40*, 290–302. <http://dx.doi.org/10.1037/0022-3514.40.2.290>
- Batson, C. D., O'Quin, K., Fultz, J., Vanderplas, M., & Isen, A. M. (1983). Influence of self-reported distress and empathy on egoistic versus altruistic motivation to help. *Journal of Personality and Social Psychology*, *45*, 706–718. <http://dx.doi.org/10.1037/0022-3514.45.3.706>
- Burnstein, E., Crandall, C., & Kitayama, S. (1994). Some neo-Darwinian decision rules for altruism: Weighing cues for inclusive fitness as a function of the biological importance of the decision. *Journal of Personality and Social Psychology*, *67*, 773–789. <http://dx.doi.org/10.1037/0022-3514.67.5.773>
- Cameron, C. D., & Payne, B. K. (2011). Escaping affect: How motivated emotion regulation creates insensitivity to mass suffering. *Journal of Personality and Social Psychology*, *100*, 1–15. <http://dx.doi.org/10.1037/a0021643>
- Campos, B., Shiota, M. N., Keltner, D., Gonzaga, G. C., & Goetz, J. L. (2013). What is shared, what is different? Core relational themes and expressive displays of eight positive emotions. *Cognition and Emotion*, *27*, 37–52. <http://dx.doi.org/10.1080/02699931.2012.683852>
- Ch'en, K. K. S. (1972). *Buddhism in China: A historical survey*. Princeton, NJ: Princeton University Press.
- Choi, I., Dalal, R., Kim-Prieto, C., & Park, H. (2003). Culture and judgment of causal relevance. *Journal of Personality and Social Psychology*, *84*, 46–59. <http://dx.doi.org/10.1037/0022-3514.84.1.46>
- Cialdini, R. B., Brown, S. L., Lewis, B. P., Luce, C., & Neuberg, S. L. (1997). Reinterpreting the empathy-altruism relationship: When one into one equals oneness. *Journal of Personality and Social Psychology*, *73*, 481–494. <http://dx.doi.org/10.1037/0022-3514.73.3.481>
- Clark, C. (1997). *Misery and company: Sympathy in everyday life*. Chicago, IL: University of Chicago Press.
- Condon, P., & Feldman Barrett, L. (2013). Conceptualizing and experiencing compassion. *Emotion*, *13*, 817–821. <http://dx.doi.org/10.1037/a0033747>
- de Bary, W., & Bloom, I. (Eds.). (1999). *Sources of Chinese tradition: From earliest times to 1600* (2nd ed., Introduction to Asian civilization). New York, NY: Columbia University Press.
- Darwin, C., Moore, J., & Desmond, A. (2004). *The descent of man and selection in relation to sex* (Penguin classics). London, UK: Penguin Books. (Original work published 1879)
- Eisenberg, N., & Eggum, N. D. (2009). Empathic responding: Sympathy and personal distress. In J. Decety & W. Ickes (Eds.), *The social neuroscience of empathy* (pp. 71–83). Cambridge, MA: MIT Press. <http://dx.doi.org/10.7551/mitpress/9780262012973.003.0007>
- Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion*, *6*, 169–200. <http://dx.doi.org/10.1080/02699939208411068>
- Feather, N. T., McKee, I. R., & Bekker, N. (2011). Deservingness and emotions: Testing a structural model that relates discrete emotions to the perceived deservingness of positive or negative outcomes. *Motivation and Emotion*, *35*, 1–13. <http://dx.doi.org/10.1007/s11031-011-9202-4>
- Goetz, J. L., Keltner, D., & Simon-Thomas, E. (2010). Compassion: An evolutionary analysis and empirical review. *Psychological Bulletin*, *136*, 351–374. <http://dx.doi.org/10.1037/a0018807>
- Goetz, J. L., & Simon-Thomas, E. (2017). The landscape of compassion: Definitions and scientific approaches. In E. Seppälä, E. Simon-Thomas, S. L. Brown, M. C. Worline, C. D. Cameron, & J. R. Doty (Eds.), *The Oxford handbook of compassion science* (pp. 3–15). New York, NY: Oxford University Press.
- Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology*, *101*, 366–385. <http://dx.doi.org/10.1037/a0021847>
- Hamilton, W. D. (1964). The genetical evolution of social behaviour. II. *Journal of Theoretical Biology*, *7*, 17–52. [http://dx.doi.org/10.1016/0022-5193\(64\)90039-6](http://dx.doi.org/10.1016/0022-5193(64)90039-6)
- Heine, S. J., & Hamamura, T. (2007). In search of East Asian self-enhancement. *Personality and Social Psychology Review*, *11*, 4–27. <http://dx.doi.org/10.1177/1088868306294587>
- Hertenstein, M. J., Keltner, D., App, B., Bulleit, B. A., & Jaskolka, A. R. (2006). Touch communicates distinct emotions. *Emotion*, *6*, 528–533. <http://dx.doi.org/10.1037/1528-3542.6.3.528>
- Hoffman, M. L. (2008). Empathy and prosocial behavior. In M. Lewis, J. M. Haviland-Jones, & L. F. Barrett (Eds.), *Handbook of emotions* (3rd ed., pp. 440–455). New York, NY: Guilford Press.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*, 1–55. <http://dx.doi.org/10.1080/10705519909540118>
- Kim, H. S., Sherman, D. K., Ko, D., & Taylor, S. E. (2006). Pursuit of comfort and pursuit of harmony: Culture, relationships, and social support seeking. *Personality and Social Psychology Bulletin*, *32*, 1595–1607. <http://dx.doi.org/10.1177/0146167206291991>
- Kitayama, S., Mesquita, B., & Karasawa, M. (2006). Cultural affordances and emotional experience: Socially engaging and disengaging emotions in Japan and the United States. *Journal of Personality and Social Psychology*, *91*, 890–903. <http://dx.doi.org/10.1037/0022-3514.91.5.890>
- Koopmann-Holm, B., & Tsai, J. L. (2014). Focusing on the negative: Cultural differences in expressions of sympathy. *Journal of Personality and Social Psychology*, *107*, 1092–1115. <http://dx.doi.org/10.1037/a0037684>
- Korchmaros, J. D., & Kenny, D. A. (2001). Emotional closeness as a mediator of the effect of genetic relatedness on altruism. *Psychological Science*, *12*, 262–265. <http://dx.doi.org/10.1111/1467-9280.00348>
- Lishner, D. A., Batson, C. D., & Huss, E. (2011). Tenderness and sympathy: Distinct empathic emotions elicited by different forms of need. *Personality and Social Psychology Bulletin*, *37*, 614–625. <http://dx.doi.org/10.1177/0146167211403157>
- Little, T. D. (2000). On the comparability of constructs in cross-cultural research: A critique of Cheung and Rensvold. *Journal of Cross-Cultural Psychology*, *31*, 213–219. <http://dx.doi.org/10.1177/0022022100031002004>
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, *1*, 130–149. <http://dx.doi.org/10.1037/1082-989X.1.2.130>

- Ma-Kellams, C., & Blascovich, J. (2012). Inferring the emotions of friends versus strangers: The role of culture and self-construal. *Personality and Social Psychology Bulletin*, *38*, 933–945. <http://dx.doi.org/10.1177/0146167212440291>
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*, 224–253. <http://dx.doi.org/10.1037/0033-295X.98.2.224>
- Markus, H. R., & Kitayama, S. (2010). Cultures and selves: A cycle of mutual constitution. *Perspectives on Psychological Science*, *5*, 420–430. <http://dx.doi.org/10.1177/1745691610375557>
- Matsumoto, D. (1990). Cultural similarities and differences in display rules. *Motivation and Emotion*, *14*, 195–214. <http://dx.doi.org/10.1007/BF00995569>
- Miller, J. G., & Bersoff, D. M. (1994). Cultural influences on the moral status of reciprocity and the discounting of endogenous motivation. *Personality and Social Psychology Bulletin*, *20*, 592–602. <http://dx.doi.org/10.1177/0146167294205015>
- Miyamoto, Y., Uchida, Y., & Ellsworth, P. C. (2010). Culture and mixed emotions: Co-occurrence of positive and negative emotions in Japan and the United States. *Emotion*, *10*, 404–415. <http://dx.doi.org/10.1037/a0018430>
- Morris, M. W., & Peng, K. (1994). Culture and cause: American and Chinese attributions for social and physical events. *Journal of Personality and Social Psychology*, *67*, 949–971. <http://dx.doi.org/10.1037/0022-3514.67.6.949>
- Mullen, E., & Skitka, L. J. (2009). Comparing Americans' and Ukrainians' allocations of public assistance: The role of affective reactions in helping behavior. *Journal of Cross-Cultural Psychology*, *40*, 301–318. <http://dx.doi.org/10.1177/0022022108328916>
- Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic versus analytic cognition. *Psychological Review*, *108*, 291–310. <http://dx.doi.org/10.1037/0033-295X.108.2.291>
- Preston, S. D. (2013). The origins of altruism in offspring care. *Psychological Bulletin*, *139*, 1305–1341. <http://dx.doi.org/10.1037/a0031755>
- Rudolph, U., Roesch, S., Greitemeyer, T., & Weiner, B. (2004). A meta-analytic review of help giving and aggression from an attributional perspective: Contributions to a general theory of motivation. *Cognition and Emotion*, *18*, 815–848. <http://dx.doi.org/10.1080/02699930341000248>
- Scherer, K. R. (1997). The role of culture in emotion-antecedent appraisal. *Journal of Personality and Social Psychology*, *73*, 902–922. <http://dx.doi.org/10.1037/0022-3514.73.5.902>
- Schwartz, S. H., & Bardi, A. (2001). Value hierarchies across cultures taking a similarities perspective. *Journal of Cross-Cultural Psychology*, *32*, 268–290. <http://dx.doi.org/10.1177/0022022101032003002>
- Shaver, P. R., Murdaya, U., & Fraley, R. C. (2001). Structure of the Indonesian emotion lexicon. *Asian Journal of Social Psychology*, *4*, 201–224. <http://dx.doi.org/10.1111/1467-8399X.00086>
- Shaver, P., Schwartz, J., Kirson, D., & O'Connor, C. (1987). Emotion knowledge: Further exploration of a prototype approach. *Journal of Personality and Social Psychology*, *52*, 1061–1086. <http://dx.doi.org/10.1037/0022-3514.52.6.1061>
- Shaver, P. R., Wu, S., & Schwartz, J. C. (1992). Cross-cultural similarities and differences in emotion and its representation. In M. S. Clark (Ed.), *Review of personality and social psychology*, No. 13, *Emotion* (pp. 175–212). Newbury Park, CA: Sage.
- Shiota, M. N., Campos, B., Gonzaga, G. C., Keltner, D., & Peng, K. (2010). I love you but . . . : Cultural differences in complexity of emotional experience during interaction with a romantic partner. *Cognition and Emotion*, *24*, 786–799. <http://dx.doi.org/10.1080/02699930902990480>
- Shun, K.-L. (1997). *Mencius and early Chinese thought*. Palo Alto, CA: Stanford University Press.
- Simon-Thomas, E. R., Keltner, D. J., Sauter, D., Sinicropi-Yao, L., & Abramson, A. (2009). The voice conveys specific emotions: Evidence from vocal burst displays. *Emotion*, *9*, 838–846. <http://dx.doi.org/10.1037/a0017810>
- Sims, T., Tsai, J. L., Jiang, D., Wang, Y., Fung, H. H., & Zhang, X. (2015). Wanting to maximize the positive and minimize the negative: Implications for mixed affective experience in American and Chinese contexts. *Journal of Personality and Social Psychology*, *109*, 292–315. <http://dx.doi.org/10.1037/a0039276>
- Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology*, *48*, 813–838. <http://dx.doi.org/10.1037/0022-3514.48.4.813>
- Sober, E., & Wilson, D. S. (1999). *Unto others: The evolution and psychology of unselfish behavior*. Cambridge, MA: Harvard University Press.
- Sprecher, S., & Fehr, B. (2005). Compassionate love for close others and humanity. *Journal of Social and Personal Relationships*, *22*, 629–651. <http://dx.doi.org/10.1177/0265407505056439>
- Stellar, J. E., Cohen, A., Oveis, C., & Keltner, D. (2015). Affective and physiological responses to the suffering of others: Compassion and vagal activity. *Journal of Personality and Social Psychology*, *108*, 572–585. <http://dx.doi.org/10.1037/pspi0000010>
- Sullivan, D., Landau, M. J., Kay, A. C., & Rothschild, Z. K. (2012). Collectivism and the meaning of suffering. *Journal of Personality and Social Psychology*, *103*, 1023–1039. <http://dx.doi.org/10.1037/a0030382>
- Sullivan, D., Stewart, S. A., Landau, M. J., Liu, S., Yang, Q., & Diefendorf, J. (2016). Exploring repressive suffering construal as a function of collectivism and social morality. *Journal of Cross-Cultural Psychology*, *47*, 903–917. <http://dx.doi.org/10.1177/0022022116655963>
- Trivers, R. L. (1971). The evolution of reciprocal altruism. *The Quarterly Review of Biology*, *46*, 35–57. <http://dx.doi.org/10.1086/406755>
- Trommsdorff, G., Friedlmeier, W., & Mayer, B. (2007). Sympathy, distress, and prosocial behavior of preschool children in four cultures. *International Journal of Behavioral Development*, *31*, 284–293. <http://dx.doi.org/10.1177/0165025407076441>
- Tsai, J. L., Knutson, B., & Fung, H. H. (2006). Cultural variation in affect valuation. *Journal of Personality and Social Psychology*, *90*, 288–307. <http://dx.doi.org/10.1037/0022-3514.90.2.288>
- Valdesolo, P., & Desteno, D. (2011). Synchrony and the social tuning of compassion. *Emotion*, *11*, 262–266. <http://dx.doi.org/10.1037/a0021302>
- Weiner, B., Perry, R. P., & Magnusson, J. (1988). An attributional analysis of reactions to stigmas. *Journal of Personality and Social Psychology*, *55*, 738–748. <http://dx.doi.org/10.1037/0022-3514.55.5.738>
- Wong, R. Y., & Hong, Y. Y. (2005). Dynamic influences of culture on cooperation in the prisoner's dilemma. *Psychological Science*, *16*, 429–434.
- Zhang, A., Reyna, C., Qian, Z., & Yu, G. (2008). Interpersonal attributions of responsibility in the Chinese workplace: A test of Western models in a collectivistic context. *Journal of Applied Social Psychology*, *38*, 2361–2377. <http://dx.doi.org/10.1111/j.1559-1816.2008.00395.x>
- Zhang, A., Rivkin, I., & An, N. (2013). Responsibility judgments and responses to people living with AIDS in China: Testing an attributional perspective. *Journal of Applied Social Psychology*, *43*, 1029–1039. <http://dx.doi.org/10.1111/jasp.12066>
- Zhang, A., Xia, F., & Li, C. (2007). The antecedents of help giving in Chinese culture: Attribution, judgment of responsibility, expectation change and the reaction of affect. *Social Behavior and Personality*, *35*, 135–142. <http://dx.doi.org/10.2224/sbp.2007.35.1.135>

Received June 22, 2016

Revision received December 25, 2017

Accepted February 22, 2018 ■