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A dissertation submitted to the department of psychology and the committee on graduate studies of Stanford University in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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# THE NEGATIVE FEELINGS THAT PEOPLE WANT TO AVOID: CULTURAL DIFFERENCES AND CONSEQUENCES FOR COMPASSION

A DISSERTATION SUBMITTED TO THE DEPARTMENT OF PSYCHOLOGY AND THE COMMITTEE ON GRADUATE STUDIES OF STANFORD UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

> Birgit Koopmann-Holm August 2013

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I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

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#### Abstract

Previous research has documented cultural differences in the positive states that people desire. Less research, however, has examined whether cultural differences exist in the negative states that people want to avoid feeling ("avoided negative affect"). Using a multimethod approach, we examined cultural differences between Americans and Germans in avoided negative affect and whether they are related to different responses to suffering, or compassion. In Study 1, using survey methods, we assessed whether avoided negative affect differs from related constructs, and based on an existing literature, tested our hypothesis that Americans want to avoid negative affect more than do Germans. As predicted, avoided negative affect is distinct from actual negative affect (the negative states people actually feel) and from ideal negative affect (the negative states people ideally want to feel) and European Americans wanted to avoid negative states more than did Germans. In Study 2, we compared the emotional content of American and German sympathy cards to examine cultural differences in responses to suffering. As predicted, American cards contained more positive and less negative content than did German cards. In Study 3, using survey methods, we examined whether cultural differences in responses to suffering were due to cultural differences in avoided negative affect. As predicted, Americans felt less comfortable sending sympathy cards that contained primarily negative content (e.g., "words will not lighten a heavy heart") than did Germans, and these differences were mediated by cultural differences in avoided negative affect. Finally, in a series of experiments, American and German participants were randomly assigned to either "avoid negative affect" or "approach negative affect" conditions. Overall, participants in the "avoid negative affect" conditions preferred sympathy cards with negative content less than those in the "approach negative affect" conditions. These findings suggest that differences in avoided negative affect at least partially drive different responses to suffering (i.e., compassion).

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#### Introduction

"Verweinen lasst die Nächte mich, Solang ich weinen mag" [Let me pass the nights in tears, As long as I want to cry] (Johann Wolfgang von Goethe; 1749-1832)

"Be still, sad heart! And cease repining; Behind the clouds is the sun still shining" (Henry Wadsworth Longfellow; 1807-1882)

Feeling negative--- sad, angry, afraid, sluggish----is a part of daily life. We are passed up for a job; we argue with a friend; we lose a loved one. However, as suggested by the above two quotes, people differ in their views and attitudes toward negative emotions. Whereas some people appear to accept and embrace their negative feelings, as reflected in the quote by German poet Goethe, others try to stop their negative emotions and focus on the positive, as reflected in the quote by American poet Longfellow. Although a significant body of research has examined different aspects of the experience of negative emotions (e.g., Brainerd, Stein, Silveira, Rohenkohl, & Reyna, 2008; Chorpita, Albano, & Barlow, 1998; Forgas, 2008; Frasure-Smith, Lesperance, & Talajic, 1995; Gross et al., 1997; Gross & Levenson, 1997; Kiefer, 2005; Kuppens, Realo, & Diener, 2008), surprisingly few studies have examined people's views or attitudes toward negative emotions, and the factors that account for such differences. And of the studies that do, few have examined the role that culture plays in shaping how people feel about their negative emotions. Here, we present five studies that address this gap in the literature. These studies use diverse methods to examine the negative affective states that people want to avoid feeling (their "avoided negative affect") in American and German contexts, and to examine how cultural differences in avoided negative affect may influence

responses to suffering. Before describing our studies and theoretical framework, we first review the existing literature on views and attitudes toward negative emotions.

#### **Previous Research on Views and Attitudes Toward Negative Emotion**

Most of the research examining views of negative emotions has focused on individual variation within the United States. For instance, Harmon-Jones and colleagues (Harmon-Jones, Harmon-Jones, Amodio, & Gable, 2011) examined individual differences in people's attitudes toward five different discrete emotions (anger, sadness, joy, fear, and disgust). Other research has examined people's tendency to fear specific negative emotions such as fear (Chambless, Caputo, Bright, & Gallagher, 1984), sadness (Taylor & Rachman, 1991) or negative emotions in general (Williams, Chambless, & Ahrens, 1997). Interestingly, the more neurotic people are, the more likely they are to choose to worry when expected to perform a hard task (Tamir, 2005), suggesting that, in certain situations, worry might be beneficial and thus more desirable for people high in neuroticism. Furthermore, older people seem to be more inclined than younger people to reduce their negative affect, whereas adolescents seem to be more inclined to retain or increase their negative affect (Riediger, Schmiedek, Wagner, & Lindenberger, 2009), suggesting age differences in views of negative affect, at least in German contexts. Finally, the more people like horror movies, the more positively they feel when they feel negative, suggesting again individual differences in the desirability of negative emotions such as fear (Andrade & Cohen, 2007).

People's attitudes toward negative emotions also seem to vary by situation. For instance, in contexts like a friend moving to a different country, people increasingly prefer negative over positive emotions (Västfjäll & Gärling, 2006), and people want to feel negative if it helps them attain a certain goal (e.g., Tamir & Ford, 2009; Tamir, Mitchell, & Gross, 2008).

This literature, however, is limited in two important ways. First, to date, few studies have examined the role that cultural factors play in shaping views of negative emotions. Although there has been increasing research on cultural differences in the positive affective states that people desire and ideally want to feel (e.g., Eid & Diener, 2001; Izard, 1971; Sommers, 1984; Tsai, 2007; Tsai, Knutson, & Fung, 2006; Tsai,

Louie, Chen, & Uchida, 2007; Tsai, Miao, & Seppala, 2007; Tsai, Miao, Seppala, Fung, & Yeung, 2007), far less research has examined cultural differences in people's views of the negative affective states. To date, only three published studies have examined views of negative emotions across cultures. One study examined subjective norms about experiencing eight emotions (joy, affection, pride, contentment, anger, fear, sadness, and guilt) in two individualistic and two collectivistic cultures (Eid & Diener, 2001). Another (Izard, 1971) asked participants from different nations which emotions they dreaded and which they preferred, and the third (Sommers, 1984) examined which emotions people in different cultures most like to experience, make them feel uncomfortable, and they dread.

Second, although the existing literature examines views of negative emotion, few consider the degree to which people want to approach or avoid them. However, research suggests that preferences have two different dimensions, an emotional one (e.g., how much people like something, how much pleasure people get out of something) and a motivational one (e.g., how much people want or desire something) (e.g., Dai, Brendl, & Ariely, 2010). Although emotion can be a source of motivation (e.g., Knutson, Wimmer, Kuhnen, & Winkielman, 2008), liking or disliking something (e.g., having a positive or negative view of something) is different from the motivational goal of approaching or avoiding something. Thus, feeling negative towards something is not necessarily associated with wanting to avoid it. Although Izard (1971) and Sommers (1984) did differentiate between which emotions people want to feel or dread, they asked their participants to simply list emotions rather than using rating scales, and therefore, they could not compare the degree to which cultures vary in how much they want to avoid negative states.

#### The Significance of Avoided States and Motivations

Substantial theory and research suggest that approach and avoidance motivations differ from each other (see Elliot [1999] for a historical overview of the distinction between approach and avoidance motivation; also see Higgins, 1997; Hull, 1952; Lewin, 1951). For instance, approaching success and avoiding failure have distinct effects on intrinsic motivations (Elliot & Harackiewicz, 1996). Furthermore, pursuing avoidance versus approach goals over the course of a semester was related to lower subjective well-

being among undergraduates (Elliot, Sheldon, & Church, 1997). Further support for the distinction between approach and avoidance motivations comes from research using EEG and neuroimaging methods (e.g., Coan & Allen, 2003; Harmon-Jones & Allen, 1997; Harmon-Jones, Lueck, Fearn, & Harmon-Jones, 2006; Sutton & Davidson, 1997; Wager, Phan, Liberzon, & Taylor, 2003).

Self-discrepancy theory (Higgins, 1987, 1997) also refers to approach and avoidance motivations. It proposes that individuals compare their actual selves with their (or a significant other's) ideal and/or ought selves. Ideal selves include hopes and wishes (desirable outcomes to be approached). Therefore, people comparing their actual selves to their ideal selves are described as promotion-focused. Ought selves, on the other hand, include responsibilities and obligations (undesirable outcomes to be avoided). Therefore, people comparing their actual selves to their ought selves are described as preventionfocused.

Ogilvie (1987) has criticized the approach of pitting "the real self in opposition to the ideal self [because it] may rob the ideal self of its more logical rival, the un-ideal self, an aspect of the self system that [he refers] to as the undesired self" (p. 380). He found that the discrepancy between the real and undesired self correlated more highly with people's life satisfaction than the discrepancy between the real and ideal self. In a similar vein, Markus and Nurius (1986) introduced the term "possible selves," which included what people think they can become in reality (expected selves), what people think they could possibly become (hoped-for selves), and what people do not want to become (feared selves). To be most effective in self-regulation, people must consider their expected and feared possible selves at the same time (Oyserman & Markus, 1990). Carver, Lawrence, and Scheier (1999) demonstrated the usefulness of an incorporation of feared selves into self-discrepancy theory.

Other research suggests that the differentiation between approach and avoidance motivations is important for emotion as well. Using confirmatory factor analyses, Maio and Esses (2001) found two factors of their measure of the need for affect, which they define as the motivation to approach or avoid emotion-inducing situations. Items loading on the approach factor included "It is important for me to be in touch with my feelings," "Emotions help people get along in life," and "We should indulge our emotions." Items

loading on the avoidance factor included "I find strong emotions overwhelming and therefore try to avoid them," "Displays of emotions are embarrassing," and "I wish I could feel less emotion." Furthermore, they found distinct correlational patterns for emotion approach and avoidance. For example, approaching (but not avoiding) emotions significantly positively correlated with affect intensity (i.e., the tendency to experience intense emotions). Avoiding (but not approaching) emotions significantly negatively correlated with sensation seeking (i.e., the tendency to search for novel and intense experiences). Similarly, in clinical settings, researchers have examined experiential avoidance, or the unwillingness to experience feelings and other internal experiences (Hayes et al., 2004).

Based on this long-standing differentiation between approach and avoidance motivations in the realm of views of the self as well as in the realm of emotion, when examining views of and attitudes towards negative emotions, it is important to distinguish between negative emotions people want to approach (i.e., find desirable) and those they want to avoid (i.e., find undesirable). This differentiation seems particularly important when examining cultural differences in views of negative emotions given observed cultural differences in frequency of approach and avoidance goals (Elliot, Chirkov, Kim, & Sheldon, 2001; Lee, Aaker, & Gardner, 2000). Furthermore, because those motivational tendencies are independent from each other (e.g., Elliot & Harackiewicz, 1996), they need to be assessed separately and not on one dimension.

Interestingly, Harmon-Jones et al. (2011) argued that we need to take the motivational direction of emotions into consideration. For instance, anger is associated with approach motivation (e.g., desire to attack the target of the anger), while fear is associated with avoidance motivation (e.g., desire to flee from the target of the fear). Yet, in assessing people's attitudes towards these different emotions, they did not differentiate whether people want to approach or avoid the emotions per se. Rather, they assessed attitudes towards emotions without differentiating between the emotional (liking) and motivational (wanting to approach or avoid) dimension. For instance, to assess attitude towards sadness, they combined items such as "I like it when movies make me feel sad, the sadder the better" and "If someone describes a movie as real 'tear jerker,' I am sure to avoid it because I don't like feeling sad." Similarly, to assess norms about experiencing

different emotions, Eid and Diener (2001) used a unidimensional scale ranging from extremely desirable and appropriate to extremely undesirable and inappropriate. Thus, like much other research, they did not differentiate between approaching and avoiding emotions either.

As mentioned above, two studies did differentiate between approach and avoidance motivations when examining views of negative emotions across cultures (Izard, 1971; Sommers, 1984). However, in addition to not examining the degree to which people want to approach and avoid different emotions, these two studies examined different discrete emotions. Less work has focused on more fundamental affective states such as those described by the affective circumplex (Russell, 1980; Russell, Lewicka, & Niit, 1989). Lastly, these two studies did not examine behavioral implications of the cultural differences in views of negative emotions. What are the consequences of these differences for how people respond to negative emotion in their daily lives? The present studies were designed to fill these gaps in the existing literature. Next, we discuss Affect Valuation Theory (AVT; Tsai, 2007; Tsai et al., 2006), our theoretical framework in which we investigate avoided negative affect.

#### Incorporating Avoided Affect into Affect Valuation Theory

Affect Valuation Theory (AVT; Tsai, 2007; Tsai et al., 2006) is the theoretical framework within which we investigated the construct of avoided affect. The first premise of AVT postulates that how people want to feel (their "ideal affect") differs from how they actually feel (their "actual affect"). Although there are times when people feel how they want to feel, on average, people ideally want to feel more positive and less negative than they actually feel (Tsai et al., 2006).

Because ideal affect tends to focus on positive states, one issue that deserves greater attention within AVT is the negative affective states. Based on the literature on approach and avoidance motivations, we proposed the new construct of avoided affect in addition to ideal affect and predicted that it is a separate construct from ideal and actual affect. Furthermore, we proposed that avoided affect mainly includes negative affective states. Of course, there may be specific situations in which avoided affect includes positive states. For example, people might try to avoid excitement initially about an opportunity they have received in order to not be disappointed later. But we suggest that, in general, people want to avoid negative more than positive affective states. Because our previous research suggests that there is very little variation in ideal negative states and because people (at least Americans) often want to avoid feeling negative when actually feeling negative (e.g., Averill & Rosenn, 1972; Nesse, 1991), we focused on the negative states that people want to avoid.

The second premise of AVT predicts that although both actual affect and ideal affect may be influenced by culture and temperament, culture shapes ideal affect more than actual affect, whereas temperament shapes actual affect more than ideal affect. Rozin (2003) and Shweder (2003) argue that cultural factors shape what people view as desirable. Similarly, AVT predicts that cultural factors should shape what affective states people view as desirable; that is, what affective states people value and ideally want to feel. Although cultural factors also shape what affective states people actually feel (Kitayama, Markus, & Kurokawa, 2000; Mesquita & Markus, 2004), decades of empirical research suggest that across cultures, actual affect is primarily shaped by people's temperament (Costa & McCrae, 1980; David, Green, Martin, & Suls, 1997; Diener & Lucas, 1999; Gross, Sutton, & Ketelaar, 1998; Lykken & Tellegen, 1996; McCrae, Costa, & Yik, 1996; Rusting & Larsen, 1997; Schimmack, Radhakrishnan, Oishi, Dzokoto, & Ahadi, 2002). This premise is empirically supported (Tsai et al., 2006).

Following Shweder's and Rozin's argument that culture shapes what people think is desirable, culture should also shape which states people think are undesirable. Support for this assumption comes from the two studies mentioned above by Izard (1971) and Sommers (1984), which found cultural differences in emotions that people dread having. Although culture might also shape how negatively people actually feel, in line with AVT, we predicted that culture shapes avoided more than actual affect.

The third premise of AVT is that ideal affect predicts mood-producing behaviors (i.e., what people do to feel good). Previous research supports this premise as well. For instance, ideal affect influences people's leisure activities and musical preferences (Tsai, 2007), how people present themselves and perceive others (Moon, Chim, Tsai, Ho, & Fung, 2011), and medical choices (Sims, Tsai, Koopmann-Holm, Thomas, & Goldstein,

in press). In their control-theory of behavior, Carver and Scheier (1998) argue that all behavior is goal directed and regulated by feedback processes. They differentiate between discrepancy reducing feedback systems and discrepancy enlarging feedback systems. While discrepancy reducing systems aim for a goal, discrepancy enlarging processes enlarge the distance from an "anti-goal." Thus, while a goal pushes behavior in a certain direction, an "anti-goal" pushes behavior away from what is unwanted. Carver and Scheier (1998) even include affect into their theory. They regard affect as a consequence for attaining (versus not attaining) one's goal or as a consequence for successfully avoiding (versus not successfully avoiding) one's "anti-goal." While affect may be an indicator of the success or failure to approach or avoid something, AVT views affect as something that can be approached (and avoided) per se. Larsen (2000) used Carver and Scheier's control theory of behavior (1998) and applied it to mood regulation. Thus, Larsen makes a construct related to affect (i.e., mood) the focus of a regulation model. However, interestingly, he only talks about a desired state as set point and disregards the possibility of an "anti-goal" related to mood.

Because ideal positive affect influences the behaviors we engage in to feel good, avoided negative affect should influence the behaviors we engage in to avoid feeling bad. Avoided negative affect can be regarded as "anti-goal" and thus, pushes behavior away from what is unwanted. We propose that avoided negative affect should shape behaviors particularly in those situations in which negative emotions are present, because the presence of negative affect should activate what people want to avoid feeling. For instance, avoided negative affect should shape how people respond to an acquaintance who has just lost a loved one. The death of a loved one is one of the most frequently mentioned elicitors of sadness across cultures (e.g., Matsumoto & Juang, 2012) and thus, the loss of a loved one can be seen as universal elicitor of sadness. However, what people do with this sadness might vary depending on how much they want to avoid negative affect. If people want to avoid feeling negative (e.g., the beautiful memories that remain). If people want to avoid feeling negative less, they might acknowledge what a difficult time their acquaintance is having.

In this paper, we will examine whether avoided affect differs from actual and ideal affect (first premise of AVT), whether culture shapes avoided affect more than actual affect (second premise of AVT) and whether avoided affect predicts how people respond to the suffering of others (third premise of AVT).

#### The Present Research

We focused on European American and German comparisons for several reasons. First, in the social science literature, there is some evidence that Americans want to avoid negative emotion more than Germans. For instance, in his book "American Cool", Stearns (1994) describes the US American emotional style and states that "fear and anger had no positive function [...]; rather than being directed, they were to be avoided as fully as possible" (p. 96). This suggests that Americans want to avoid feeling negative emotions like fear and anger to a great extent. Furthermore, he writes "certain emotions the Victorians had cherished, like grief, were now regarded more negatively, almost as negatively as anger and fear" (p. 96). Thus, Americans want to avoid a variety of negative states. Similarly, Wilson (2008) describes in his book "Against Happiness" the first American settlers as people wishing to avoid sadness by going to the "Promised Land" and as people who are extremely optimistic even when faced with drawbacks: "They thought that they would on the American shore discover true happiness and put most sadness to rout. When their hopes were destroyed by the icy reality of the New England coast, they nonetheless persisted in their optimism" (p. 11). Furthermore, he describes Americans as "Happy types, those Americans bent only on happiness and afraid of sadness" (p. 24). In line with this, McAdams (2004) describes "the transformation of personal suffering into positive-affective life scenes that serve to redeem and justify one's life" (p. 96) as the key feature of contemporary American narrative identity. This suggests that Americans, when telling their lives as stories, have the tendency to avoid negative feelings by creating stories with positive endings. American culture does not consider "negativity, complaining, pessimism" as virtuous (Held & Bohart, 2002, p. 961). As another example, Ehrenreich (2009) describes in her book "Bright-sided" how people did not want to hear her negative thoughts and emotions she voiced on a message board when she was battling with breast cancer. Other American cancer patients around her disliked her attitude and wanted her to get professional help to turn her negative feelings into something positive. Ehrenreich describes how American positive thinking can even turn breast cancer into a "gift" through which people can live their real life. The famous American song by Bobby McFerrin "Don't worry, be happy" is yet another example of the American desire to avoid the negative and approach the positive.

However, recently, researchers have begun to examine the negative consequences of only wanting to feel good (Grant & Schwartz, 2011; Gruber, Mauss, & Tamir, 2011; Mauss et al., 2011) or of positive psychology per se (Held, 2004) as well as the positive side of negative emotions (e.g., Forgas, Goldenberg, & Unkelbach, 2009; Held & Bohart, 2002; Norem & Chang, 2002; Tan & Forgas, 2010) or of accepting negative emotions (Shallcross, Troy, Boland, & Mauss, 2010). Norem and Chang state that "dominant American culture – and research in psychology – may underestimate some of the costs of optimism" (Norem & Chang, 2002, p. 993). For instance, it is dangerous if people are optimistic in situations that require their noticing the warnings. Furthermore, people cannot improve if they only hear positive and disregard negative feedback.

In contrast, Germans are often described as being melancholic and pessimistic, and as dwelling on their negative emotions, as the terms "Weltschmerz" and "Angst" suggest (Clair, 2005; Gelfert, 2005). In line with these descriptions of the German culture is the "Sturm und Drang" ["Storm and Drive"] movement in German literature and music in the 18<sup>th</sup> century. This movement is characterized by the free expression of extreme positive and negative emotions. All emotions and spontaneity were not just accepted, but even glorified during this movement. German Expressionism, another movement in poetry and painting at the beginning of the 20<sup>th</sup> century, is also characterized by the expression of positive and negative emotional experiences. Research in psychology comparing Americans and Germans produces similar findings. For instance, Friday (1989) compared the German "Besprechung" (German for discussion) and the American "discussion" among colleagues, and found that Germans use forcefulness in their "Besprechungen" and do not hesitate to strike at an error made by others. In contrast, Americans do not attack others in their discussions since they would regard such a behavior as a sign of disrespect and dislike. Similarly, Koopmann-Holm and Matsumoto (2011) found that

German display rules allowed the expression of anger and sadness more than did American display rules.

The American desire to avoid negative emotions is also reflected in American dominant models of compassion and empathy, or behaviors related to responding to the suffering of others. The empathy-altruism hypothesis by Batson and colleagues (Batson, 1981, 1983; Batson et al., 1991) suggests that when people feel distress instead of empathy when seeing someone else suffer, they are *less* likely to help. Helping only occurs if that is the only way to reduce one's own distress. Distress is seen as a selffocused, aversive reaction, which prevents feelings of empathy and thus altruistic behaviors. The negative state relief model by Cialdini and colleagues (1973) states that increased empathy leads to increased personal sadness. This sadness leads to more helping behavior, because people want to lift their own mood by helping someone else. Experimental support exists for both models (e.g., Batson et al., 1991; Cialdini et al., 1987). Despite the differences between these two models, both models are based on the assumption that people do not want to feel negative emotions: Batson and colleagues (1991) assume that distress is aversive and thus prevents altruistic responses; furthermore, they argue that people want to get rid of their distress and thus help when they cannot escape the situation otherwise. Cialdini and colleagues (1973) argue that people only help because they want to get rid of their own distress.

While there are no German models of compassion or empathy to the best of our knowledge, the English term "empathy" resulted from the translation of the German word "Einfühlung", which literally means "feeling into." German philosopher and psychologist Theodor Lipps regarded "Einfühlung" the key to see beauty in the arts (Lipps, 1923). It is only possible to "feel into" something or someone when one does not want to avoid feeling emotions. Thus, the term "Einfühlung" and its importance in German philosophy about aesthetic experiences suggests that for Germans, feeling all emotions---both positive and negative----is valued. Together, these findings suggest that people in American contexts want to avoid negative states more than do people in German contexts. One possible explanation for these differences are the different histories of American and German societies: While early American settlers went to the new Promised Land (Lipset, 1997) to improve their life's circumstances and likely their emotions

("American Frontier" Spirit; Turner & Abbe, 1893), the ancestors of today's Europeans stayed in their homeland and accepted their life's circumstances and emotions (what one might call "Homeland Spirit").

Second, there is some literature that suggests differences in American and German responses to the suffering of others. For example, the development of psychotherapeutic techniques differ in the US and Germany. Sigmund Freud, the father of psychoanalysis, was Austrian and thus influenced by German culture. Therefore, the notion that suppressing and avoiding emotions is bad and that one needs to release, accept, and talk about any emotion as form of therapy (Freud, 1977) emerged in the German-speaking region of Europe. Decades later, in opposition to this psychodynamic approach, the American psychiatrist Aaron Beck developed cognitive therapy (Beck, 1979). Thus, "mood repair strategies," one important tool of cognitive therapy through which the patient can avoid negative emotions, emerged in the US. Interestingly, in an American sample, repressive coping led to better mental and physical health after the loss of a loved one than non-repressive coping (Coifman, Bonanno, Ray, & Gross, 2007), suggesting that repression might be beneficial in certain situations (Bonanno, Papa, Lalande, Westphal, & Coifman, 2004) – at least in American culture.

Lastly, most research in (cross-) cultural psychology focuses on differences between Eastern and Western cultures. Therefore, we were interested in comparing different Western cultures because previous findings suggest important differences between American and European cultures in their value priorities (Schwartz & Ros, 1995) and emotional display rules (Koopmann-Holm & Matsumoto, 2011) that might have implications for the avoidance of negative affect.

The present studies examined whether avoided affect is a separate construct from actual and ideal affect, whether Americans and Germans differ in how much they want to avoid feeling negative, and whether these differences lead to cultural differences in responses to suffering. Study 1 examined whether avoided affect is separate from actual and ideal affect as well as from other related constructs. Studies 1 and 3 tested the hypothesis that European Americans would want to avoid feeling negative more than would Germans. Studies 2 and 3 examined whether European Americans would focus more on the positive and less on the negative compared to Germans when responding to

the suffering of another. In Studies 4 and 5, we experimentally manipulated avoided negative affect in American and German samples to assess whether it produced differences in how people respond to others' suffering.

#### **Study 1: Cultural Differences in Avoided Negative Affect**

#### **Hypotheses**

We predicted that: (1) avoided negative affect, ideal negative affect, and actual negative affect are distinct factors, (2) the factor structure of avoided, ideal, and actual negative affect holds across European American and German samples, (3) avoided negative affect is distinct from prevention focus, (4) people want to avoid negative states more than they ideally want to or actually feel them, and (5) European Americans want to avoid feeling negative more than Germans do. We were agnostic as to whether we would find cultural differences in actual negative affect, but based on AVT and the fact that avoided affect is a motivational goal like ideal affect, we predicted that if we observed cultural differences in actual negative affect, they would be smaller in magnitude than cultural differences in avoided negative affect.

#### Method

# Participants

One-hundred and nineteen European American (73.95% female) students and 104 German students (81.73% female) participated in this study. There were no group differences in gender ( $\chi 2$  [1, 223] = 1.93, *ns*). However, Germans were significantly older (mean age = 23.71, SD = 4.61) than European Americans (mean age = 20.22, SD = 4.47), *F* (1, 221) = 32.89, *p* < .001, partial eta squared = .13. Therefore, we included age as covariate in the analyses described below. American participants received a \$10 Amazon gift certificate, and German participants received a Euro 7 Amazon gift certificate as compensation for their participation.

#### Instruments

Assessment of Actual, Ideal, and Avoided Affect. To assess actual and ideal affect, participants completed the Affect Valuation Index (AVI; Tsai & Knutson, 2006).

Participants used a five-point scale ranging from 1 ("never") to 5 ("all the time") to rate how often they <u>actually</u> felt and how often they <u>ideally wanted to</u> feel 37 different affective states that sampled each octant of the affective circumplex (high-arousal positive [HAP; e.g., elated, enthusiastic, euphoric], positive [P; e.g., content, happy, satisfied], low-arousal positive [LAP; e.g., peaceful, calm, relaxed], high-arousal negative [HAN; e.g., fearful, hostile, nervous], negative [N; e.g., sad, unhappy, lonely], lowarousal negative [LAN; e.g., dull, sleepy, sluggish], high-arousal [HA; e.g., astonished, surprised], and low-arousal [LA; e.g., idle, passive, inactive]) (Russell, 1980; Russell et al., 1989) over the course of a typical week. To assess avoided affect, participants used the same rating scale to indicate <u>how often they wanted to avoid feeling</u> the same states over the course of a typical week.

The convergent and discrimimant validity of the measures of ideal and actual affect for American samples have been reported elsewhere (Tsai et al., 2006). The construct validity of reported actual affect has been demonstrated in previous studies (e.g., Diener & Larsen, 1984). Furthermore, the measures of ideal and actual affect have good testretest reliabilities (ranging from .52 to .77, see Tsai et al., 2006). Reliabilities for the current sample are reported below.

**Measure of Prevention-Promotion Focus.** To assess whether avoided affect was distinct from prevention regulatory focus, participants completed the general regulatory focus measure (GRFM; Lockwood, Jordan, & Kunda, 2002). This scale is comprised of 18 items, half of which assess prevention-focus (e.g., "In general, I am focused on preventing negative events in my life"), and half of which assess promotion-focus (e.g., "I frequently imagine how I will achieve my hopes and aspirations"). Participants used a 9-point rating scale ranging from 1 ("not at all true of me") to 9 ("very true of me") to indicate how true each statement was. Internal consistencies (based on Cronbach's alpha) were high for both European Americans (.83 for prevention focus, .72 for promotion focus) and Germans (.68 for prevention focus, .69 for promotion focus).

**Demographic Questionnaire.** Participants completed a demographics questionnaire, which assessed gender, age, place of birth, and cultural upbringing.

#### Procedure

Participants were recruited via email announcements and flyers distributed at large top-tier universities in the US and Germany. European American participants completed all measures in English, and German participants completed all measures in German. Back-translation procedures were used. All participants completed the measures online. The order of the ideal, actual, and avoided versions of the AVI was counterbalanced. Because the order of these measures did not have an effect on the results, we will not discuss it further. Other measures were included in the study as fillers.

#### **Data Analyses and Results**

Given group differences in age, we included age as a covariate. For parsimony, we retained age in the model when it was a significant covariate and removed it when it was not.

#### Is Avoided Negative Affect Different From Actual and Ideal Negative Affect?

We were first interested in whether among the negative states, avoided affect was distinct from actual and ideal affect, and if so, whether we would see differentiation among HAN, N, and LAN states. To test Hypothesis 1, we conducted confirmatory factor analyses using AMOS 21. We included three items from each of the negative octants (HAN: fearful, hostile, nervous; N: sad, unhappy, lonely; and LAN: dull, sleepy, sluggish) for avoided, ideal, and actual affect and treated each as indicators for the three latent variables of ideal, actual, and avoided negative affect.

We hypothesized a model (see Figure 1) that included nine separate latent variables (avoided HAN, N, and LAN; actual HAN, N, and LAN; and ideal HAN, N, and LAN) and three second-order factors (the first combining avoided HAN, N, and LAN into an overall avoided negative factor, the second combining actual HAN, N, and LAN into an overall actual negative factor, and the third combining ideal HAN, N, and LAN into an overall ideal negative factor). In the model, we allowed these three second-order factors to covary with each other. Thus, our model included 3 covariance links. Across both groups, the confirmatory factor analysis testing this model revealed that the data fit the model well,  $\chi^2(312, N = 223) = 573.34$ , p < .001; the root mean square of error approximation (RMSEA) = .06, with confidence interval .05 to .07; and the Akaike

Information Criterion (AIC) = 759.34. The covariance links between the second-order avoided negative and ideal negative factors (-.03, p < .05), between the second order avoided negative and actual negative factors (-.02, *ns*), and between the second order ideal negative and actual negative factors (.04, p < .01) were small to moderate (see Figure 1).

To test whether the constructs of ideal and avoided negative affect overlap, we constrained the covariance link between ideal and avoided negative affect to be -1. Across both groups, this constrained model had a significantly worse fit than the unconstrained model,  $\chi^2(313, N = 223) = 775.98$ , p < .001; the RMSEA = .08, with confidence interval .07 to .09; and the AIC = 959.98,  $\Delta \chi^2 = 202.64$ ,  $\Delta df = 1$ , p < .001. We also tested whether the constructs of actual and avoided negative affect overlap. To do this, we constrained the covariance link between actual and avoided negative affect to be -1. Across both groups, this constrained model had a significantly worse fit than the constrained the covariance link between actual and avoided negative affect to be -1. Across both groups, this constrained model had a significantly worse fit than the unconstrained model,  $\chi^2(313, N = 223) = 725.48$ , p < .001; the RMSEA = .08, with confidence interval .07 to .08; and the AIC = 909.48,  $\Delta \chi^2 = 152.14$ ,  $\Delta df = 1$ , p < .001.

To summarize, these findings suggest that consistent with Hypothesis 1, although avoided affect is significantly negatively correlated with ideal (and nonsignificantly with actual) negative affect, the magnitude of the correlation is small, suggesting that actual, ideal, and avoided negative affect are distinct constructs at both the second-order level (i.e., across all negative states) and at the first-order level (i.e., for each type of negative affect).

#### **Does This Structure Hold Across Cultures?**

Before we can compare psychological constructs across different cultures, we have to demonstrate measurement equivalence (Little, 1997). In order to examine whether the model described above (and shown in Figure 1) held for European Americans and Germans (i.e., all measurement weights are the same across both cultures), we performed a multiple-group confirmatory factor analysis using AMOS 21 (e.g., Cheung & Rensvold, 1999). All path coefficients were free to vary across the two groups. This unconstrained model had a good fit,  $\chi^2(624, N = 223) = 1020.08, p < .001$ ; the RMSEA = .05, with confidence interval .05 to .06; and the AIC = 1392.08. Then all measurement weights were fixed to be the same across both cultures. This fully

constrained model provided a significantly worse fit than the unconstrained model,  $\chi^{2}(642, N = 223) = 1056.19, p < .001$ ; the RMSEA = .05, with confidence interval .05 to .06; and the AIC = 1392.19,  $\Delta \chi^2 = 36.11$ ,  $\Delta df = 18$ , p < .01. Thus, we examined which specific path differed the most between European Americans and Germans. It was the path between the indicator variable ideal hostile and the latent variable ideal N. When we unconstrained this weight, still fixing all the other measurement weights to be the same across both cultures, we found that this constrained model did not provide a significantly worse fit than the unconstrained model,  $\chi^2(641, N=223) = 1046.43, p < .001$ ; the RMSEA = .05, with confidence interval .05 to .06; and the AIC = 1384.43,  $\Delta \chi^2 = 26.35$ ,  $\Delta df = 17$ , ns. This suggests that consistent with Hypothesis 2, our proposed model holds for European Americans and Germans except for the link between ideal hostile and ideal HAN affect. Ideal hostile was related to ideal negative affect in the European American (estimate = 1.92, p < .01) but not in the German sample (estimate = .33, ns). However, the constructs of avoided negative and actual negative affect (the constructs we focus on in the present research) have the same structure for both European Americans and Germans. Together, these findings suggest that dividing avoided affect into the negative octants of the affective circumplex and combining them into one overall factor is empirically valid and equivalent across American and German contexts.

#### Mean Aggregates: Correlations and Internal Consistency Estimates

Mean aggregate scores were computed for items that sampled each negative octant of the affective circumplex. Cronbach's alphas are reported in Table 1. The internal consistencies for the negative aggregates (HAN, LAN, and N) were lower for ideal affect (.43 - .69) than for actual and avoided affect (Actual: .64 - .84, Avoided: .76 - .92), which supports the notion that ideal affect might not be as useful in examining negative affective goals as avoided affect.

European Americans had a lower overall mean response to all actual affect items (American mean = 2.47, SE = .02; German mean = 2.81, SE = .03; F(1, 221) = 94.70, p < .001, partial eta squared = .30) and to all ideal affect items (European American mean = 2.44, SE = .02; German mean = 2.62, SE = .02; F(1, 220) = 42.56, p < .001, partial eta squared = .16) than did Germans. However, European Americans had a higher overall mean response to all avoided affect items (European American mean = 2.91, SE = .05;

German mean = 2.54, SE = .06; F(1, 219) = 22.53, p < .001, partial eta squared = .09). This is in line with previous research that found American-German differences in response-style (e.g., Koopmann-Holm & Matsumoto, 2011).

Because of these cultural differences in response style and previous findings showing that people differ in how much they want to avoid feeling emotions in general (e.g., Maio & Esses, 2001), we mean deviated participants' responses by subtracting each individual's overall mean response to all the avoided affect items from the raw score for each item, and then we calculated the mean aggregate score of avoided HAN, N, and LAN affect. We followed the same procedure for the actual and ideal affect items. These mean deviated scores represent participants' avoided, actual, and ideal negative affect relative to their own mean. We used these scores for avoided, actual, and ideal affect in all subsequent analyses.<sup>1</sup>

The correlations among the factors are reported in Table 2, the correlations for the European Americans are shown above the diagonal, and for Germans below the diagonal.<sup>2</sup>

#### Is Avoided Affect Distinct from Prevention-Focus?

We conducted partial correlations on avoided HAN, N, and LAN with preventionfocus and promotion-focus, controlling for actual HAN, N, LAN, respectively for European Americans and for Germans. In line with our predictions, no significant correlations were found with prevention-focus for European Americans (HAN:  $r_{partial}[115] = .17$ , ns; N:  $r_{partial}[116] = .13$ , ns; LAN:  $r_{partial}[116] = .05$ , ns) or Germans (HAN:  $r_{partial}[99] = -.01$ , ns; N:  $r_{partial}[99] = -.04$ , ns; LAN:  $r_{partial}[99] = .10$ , ns). Although weak to moderate correlations were found with promotion-focus for European Americans (HAN:  $r_{partial}[115] = .13$ , ns; N:  $r_{partial}[116] = .19$ , p < .05; LAN:  $r_{partial}[116] = .07$ , ns) and Germans (HAN:  $r_{partial}[98] = -.29$ , p < .01; N:  $r_{partial}[98] = -.22$ , p < .05; LAN:

<sup>&</sup>lt;sup>1</sup> In previous work coming from our lab, we ipsatized the AVI scores. Instead of ipsatization, we chose to use mean deviation in order to be able to use the same scores for all analyses reported in the present paper. As ipsatized scores are not recommended for analyses based on correlations, but because we still wanted to control for the mean rating of all the avoided affect items when examining avoided negative affect (the reasons for doing that are stated in the main text), we opted for the mean deviated scores. The results were very similar to those of the raw data.

<sup>&</sup>lt;sup>2</sup> We also examined the correlations between avoided negative (HAN, N, and LAN) and ideal positive (HAP, P, and LAP) affect. For European Americans, they ranged from r[119] = .01, *ns* to r[119] = .28, p < .01. For Germans, they ranged from r[102] = .00, *ns* to r[102] = .14, *ns*.

 $r_{partial}[98] = -.02$ , *ns*), the findings still suggest that consistent with Hypothesis 3, avoided HAN, N, and LAN are distinguishable from prevention (and also promotion) focus. Findings did not change when we did not control for actual affect.<sup>3</sup>

# Do People Want To Avoid Negative States More Than They Ideally Want to and Actually Feel Them?

To test Hypothesis 4 that people want to avoid negative states more than they ideally want to or actually feel them, we conducted pairwise *t*-tests on avoided HAN, N, and LAN with ideal HAN, N, and LAN as well as with actual HAN, N, and LAN affect. We also paired ideal HAN, N, and LAN with actual HAN, N, and LAN. All means statistically differed from each other, p < .001. As Figure 2 shows, across HAN, N, and LAN states, participants indicated that they wanted to avoid negative more than they ideally wanted to feel or actually felt them. The results were the same when we ran the analyses for both cultural groups separately.

#### Do European Americans Want to Avoid Feeling Negative More Than Do Germans?

We initially ran our analyses with Gender as a between subjects factor; however, because there were neither significant Gender main effects nor any significant Gender by Group interactions, we dropped Gender from our final analyses. We controlled for actual affect when examining group differences in avoided affect, and we controlled for avoided affect when examining group differences in actual affect to determine the independent effects of culture on each type of affect. The findings did not change when we did not include these covariates.

To test Hypothesis 5 that European Americans want to avoid feeling negative states more than Germans do, we conducted analyses of covariance (ANCOVAs) on avoided HAN, N, and LAN separately with group (European American and German) as the independent variable, controlling for actual HAN, N, and LAN, respectively and age when it emerged as a significant covariate (which was the case for avoided HAN and N,

<sup>&</sup>lt;sup>3</sup> After we had collected the data for Study 1, Harmon-Jones and colleagues published the Attitudes Toward Emotions Scale (ATE; Harmon-Jones et al., 2011), another scale that might be related to avoided negative affect. To test whether avoided negative affect is distinct from the negative subscales (anger, sadness, fear, and disgust) of the ATE scale, we administered the ATE scale in Study 3. We computed partial correlations between avoided HAN, N, and LAN and the negative subscales of the ATE scale, controlling for actual HAN, N, LAN, respectively. No significant correlations were found (results available on request). This suggests that avoided negative affect is distinguishable from general attitudes towards emotions. The findings did not change when we did not control for actual negative affect.

but not for avoided LAN). As predicted and depicted in Figure 3, European Americans wanted to avoid HAN, N, and LAN states significantly more than did Germans (HAN: European American mean = 1.31, SE = .06; German mean = .97, SE = .07, F(1, 217) = 13.62, p < .001, partial eta squared = .06; N: European American mean = 1.27, SE = .07, German mean = .91, SE = .07, F(1, 218) = 12.10, p < .01, partial eta squared = .05; LAN: European American mean = 1.15, SE = .05, German mean = .95, SE = .06, F(1, 219) = 5.68, p < .05, partial eta squared = .03).

We also examined group differences in actual negative affect. We conducted ANCOVAs on actual HAN, N, and LAN separately with group as the independent variable, controlling for avoided HAN, N, and LAN, respectively and age when it emerged as a significant covariate (which was the case for actual HAN, but not for actual N and LAN). As depicted in Figure 3, European Americans and Germans did not differ in how much they actually felt HAN (European American mean = -.46, SE = .05; German mean = -.34, SE = .05; *F*[1, 217] = 2.45, *ns*) or LAN (European American mean = .12, SE = .06; German mean = -.01, SE = .06; *F*[1, 219] = 2.35, *ns*). However, European Americans (marginal mean = -.23, SE = .06) actually felt N states significantly less than did Germans (marginal mean = -.05, SE = .06), *F*(1, 219) = 4.07, *p* < .05, partial eta squared = .02. However, as predicted, this effect size is smaller than that of the cultural difference in avoided N (see above).<sup>4</sup>

#### Study 1 Summary

As predicted, our results suggest that (1) avoided negative affect, ideal negative affect, and actual negative affect are distinct factors, (2) the factor structure of avoided and actual (and mostly also of ideal) negative affect holds across European American and German samples, (3) avoided negative affect is distinct from prevention focus, (4) people want to avoid negative states more than they ideally want to or actually feel them, and (5) European Americans want to avoid feeling negative more than do Germans. Also, as

<sup>&</sup>lt;sup>4</sup> We also examined avoided and actual affect for the other 5 octants of the affective circumplex and found that for avoided affect, controlling for actual affect, European Americans wanted to avoid feeling HA states more and HAP, P, and LA states less than did Germans. For actual affect, controlling for avoided affect, we found that European Americans actually felt P and LA states more and HA states less than did Germans. For ideal affect, controlling for actual affect, we found that European Americans ideally wanted to feel HAP, LAN and LA more and LAP and HA less than did Germans. No other significant group differences were found.

predicted, the cultural differences we found in actual negative affect were smaller than the cultural differences in avoided negative affect, suggesting that, as with ideal affect, culture shapes avoided affect more than actual affect.

What implications do these cultural differences in avoided affect have for how people respond to the suffering of another person, or express compassion? To begin to answer this question, we examined the content of American and German sympathy cards. Various studies have examined the content of "cultural products" (e.g., newspapers, books, television, advertisements, architecture, laws, websites), or widely-distributed objects that both reflect and reinforce cultural ideas (e.g., Han & Shavitt, 1994; Lamoreaux & Morling, 2012; Markus, Uchida, Omoregie, Townsend, & Kitayama, 2006; Morling & Lamoreaux, 2008; Tsai, Louie, et al., 2007; Tsai, Miao, & Seppala, 2007). Indeed, Morling and Lamoreaux (2008) argue that in some cases, examining the content of widely distributed products is an even better way of illustrating dominant ideas and practices because these products are typically marketed to a general public, and therefore, target shared ideas. This is somewhat different from responses to questionnaire measures, for example, which typically reflect a combination of shared (e.g., culture) and unique (e.g., temperament) influences. Moreover, because these cultural products are widely distributed, members of a culture learn how to think and feel by being exposed to them. For example, in previous work examining cultural differences in ideal affect, our lab compared the emotional content of best-selling American and Taiwanese children's storybooks and observed that American storybooks contained characters with more excited and fewer calm smiles. Our lab then showed that being exposed to storybooks that promoted either excitement or calm altered children's affective preferences (Tsai, Louie, et al., 2007).

We focused on sympathy cards because in American and German contexts, sympathy cards are typically sent to a friend or close acquaintance when that person is suffering the loss of a loved one. In both cultures, the cards are designed to convey a feeling toward the person who has suffered a loss. In both cultures, the cards are widely distributed and therefore readily available. Moreover, Americans and Germans are regularly exposed to these cards because they are sold in a variety of stores. Finally, because cards are a consumer product (like storybooks, magazines), we assume that when

people purchase the cards, they are expressing a preference for the type of emotions conveyed in the card.

#### Study 2: Cultural Differences in Emotional Content of Popular Sympathy Cards

To examine whether cultural products designed as responses to suffering are influenced by the degree to which a culture wants to avoid feeling negative, we compared the emotional content of American and German sympathy cards, typically sent when a friend or acquaintance has endured the death of a loved one. As a control, we compared the emotional content of American and German baby cards, typically sent when a friend or acquaintance has just had a new baby. We chose baby cards as a control, because like sympathy cards, they are sent in response to a significant emotional event in someone's life. However, baby cards are designed as responses to a positive event and therefore, should not be influenced by the degree to which a culture wants to avoid feeling negative.<sup>5</sup>

#### *Hypotheses*

Based on our finding that Americans want to avoid feeling negative more than do Germans, we predicted that American sympathy cards would contain less negative (i.e., less death imagery, less acknowledgment of suffering and grief, fewer words related to sadness and death) content than would German sympathy cards. The "anti-goal" of avoided negative affect should just result in less negative content in American compared to German sympathy cards. However, the descriptions of the American culture above suggest that the tendency to approach positive affect seems to be very pronounced in the US as well (e.g., Ehrenreich, 2009). Therefore, we also predicted that American sympathy cards would contain more positive (i.e., more living imagery, more encouragement, more words related to positive feelings and optimism) content than

<sup>&</sup>lt;sup>5</sup> As another type of card that one would send as a response to the suffering of another person, we also wanted to examine American and German get well cards. However, in talking to some of the German card manufacturers, we noticed quickly that there is not a very big market for get well cards in Germany. After we obtained the get well cards, we had 106 American, but only 29 German cards. Because of this discrepancy and the fact that get well cards are not that often sent in the German culture, we refrained from including them in our analyses.

would German sympathy cards. Finally, we did not predict cultural differences in the emotional content of baby cards.

#### Method

#### **Card Selection**

In order to select a representative sample of the sympathy and baby cards that are widely distributed in American and German contexts, we first asked 28 European American (67.86% female; mean age = 19.00, SD = 1.12) and 22 German undergraduate students (81.82% female; mean age = 21.95, SD = 1.53) from large top-tier universities in the US and Germany to list the top three places they would go to purchase a sympathy card if they wanted to send a sympathy card to one of their friends who had just lost a loved one. We counted how often each store was mentioned across the three places the participants mentioned and weighted the stores based on whether they were mentioned first (we multiplied the frequencies of each store mentioned first by 3), second (we multiplied the frequencies of each store mentioned second by 2), or third (we multiplied the frequencies of each store mentioned by 1). Across all three responses, European American participants most often mentioned Hallmark (weighted sum: 25), CVS (weighted sum: 16), Target and Walmart (weighted sum: 10 each). German participants most often mentioned Kaufhof (weighted sum: 18), "Buchhandlung" (German for book store) (weighted sum: 16), and "Schreibwarenladen" (German for stationary store) (weighted sum: 16). We went to these stores in the US and Germany to identify the types of cards that these stores sold.

Most of the American cards were sold by Hallmark and American Greetings (including this company's greeting card brands Carlton Cards and Papyrus), and most of the German cards were sold by bsb, Taurus, Hallmark, and Hanra. We contacted these companies for a catalogue of their cards. In the US, Hallmark and American Greetings did not have a catalogue and suggested that we go to various stores and purchase the cards ourselves (they also indicated that the cards on their websites were not the same as the ones available in the stores). Therefore, we went to different Hallmark, Target, CVS, and Walmart stores in the area and purchased all the sympathy and baby cards they carried. In Germany, bsb and Taurus provided their catalogues; Hallmark provided a

random selection of their cards, and Hanra provided their best-selling cards. We also obtained additional cards from Hanra's website, which lists the same cards as one can buy in stores. This process produced 338 American (198 sympathy, 140 baby) and 376 German (246 sympathy, 130 baby) cards.

### Sympathy and Baby Card Coding

We used the Linguistic Inquiry and Word Count Program (LIWC; Pennebaker, Francis, & Booth, 2001) to code the text on the sympathy and baby cards.<sup>6</sup> To assess frequency of <u>negative words</u>, we examined the percentages of words in the LIWC categories "Sadness or depression" (e.g., grief, cry, sad) and "Death and dying" (e.g., dead, burial, coffin) by aggregating them into one variable "sadness/death." To assess frequency of <u>positive words</u>, we examined the percentages of words in the categories "Positive feelings" (e.g., happy, joy, love) and "Optimism and energy" (certainty, pride, win) by aggregating them into one variable "positive feelings/optimism."

While the types of words that occur in the cards are important, so is the way in which each word is used. For instance, sadness can be encouraged ("take time to grieve") or discouraged ("we hope time will take your grief away"). Therefore, in addition to the LIWC analyses, a more elaborate manual coding system was used for the sympathy cards.

Two trained research assistants, one European American female (who was fluent in English and German and who had lived in the US most of her life) and one German female (who was fluent in German and English and who had lived in Germany most of her life) coded the sympathy cards in their original languages. Both coders were blind to the study hypotheses. To assess reliability, coders overlapped on 18% of the cards (79 sympathy cards). On average, inter-rater reliability was excellent (average Cohen's kappa = .73, ranging from .69 to .75).

To assess how much the sympathy cards focus on the <u>negative</u>, the text on the cards was rated whether it acknowledged the suffering and grief of the sender and

<sup>&</sup>lt;sup>6</sup> We used the 2001 version of the LIWC internal dictionary because, unlike the 2007 version, the 2001 version includes two categories that count words central to our hypothesis testing, namely "positive feelings" and "optimism and energy." Although these categories were eliminated from the 2007 version because they were rarely used, they are still valid according to J. Pennebaker (personal communication, May 29, 2013). These two categories nicely parallel the categories "sadness or depression" and "death and dying", which can be found in both the 2001 and 2007 dictionary version and that are central to our hypotheses.

receiver of the card (see Table 3). Inter-rater reliability was excellent (Cohen's kappa = .75, p < .001). To assess how much the sympathy cards focus on the <u>positive</u>, coders rated whether a sympathy card expressed encouragement/a wish for something positive (see Table 3). Inter-rater reliability was excellent (Cohen's kappa = .75, p < .001).

We also coded the images on the cards (see Table 3). If there was only one image on the card, that image was coded. If there was more than one image on the card, coders coded the most prominent image. Images on the cards were coded as: (1) dying (e.g., shriveled leaves), (2) living (e.g., living flower), or (3) neutral (e.g., rocks, water). Interrater reliability was excellent (Cohen's kappa = .69, p < .001).

#### Data Analyses and Results

LIWC calculates the percentage of words in a category compared to all words in a card. However, before testing our hypotheses using the manually coded text variables for the sympathy cards, we examined whether the sympathy cards differed in number of words they contained. We conducted a univariate analysis of variance (ANOVA) by Group (US, Germany) on word count, which we obtained from LIWC. The American sympathy cards contained significantly more words than the German sympathy cards (American mean = 39.10, SE = 1.39; German mean = 10.32, SE = 1.25; *F*[1, 442] = 237.38, *p* < .001, partial eta squared = .35). Therefore, we controlled for number of words in the analyses below when we looked at the manually coded text variables.

Table 4 illustrates the correlations among the variables for the sympathy cards (in computing these correlations, we controlled for word count for the manually coded variables by using the percentage of each respective coded category relative to the total word count). Correlations for American cards occur above the diagonal; correlations for German cards occur below the diagonal. With one exception (for German cards, the correlation between manually coded grief and LIWC coded sadness/death), the correlations among the variables were generally weak to moderate. Thus, we concluded that the variables seem to cover different aspects of the cards and should not be combined but analyzed separately. For the baby cards, the LIWC coded variables sadness/death and positive feelings/encouragement were not correlated among the American (r = -.10, ns) or

the German cards (r = -.11, ns), mainly because very few baby cards mentioned sadness/death.

# Do American Sympathy Cards Contain Less Negative and More Positive Content Than German Sympathy Cards?

Frequency of Positive and Negative Words. To examine whether the American and German cards differ in the negative and positive LIWC categories described above, we conducted a 2 (Culture: US, Germany) x 2 (Card Type: Sympathy, Baby) x 2 (valence: negative LIWC category, positive LIWC category) repeated measures ANOVA with culture and card type as between-group factors and valence as within-group factor. We found a significant main effect for valence (F[1, 710] = 11.14, p < .01, partial etasquared = .02), which was qualified by significant interactions for valence by culture (F[1, 710] = 10.87, p < .01, partial et a squared = .02), valence by type (F[1, 710] = 81.32), valence by type (F[1, 710p < .001, partial eta squared = .10), and valence by culture by type (F[1, 710] = 13.42, p < .001, partial eta squared = .02). As predicted and depicted in Figure 4, simple effects analyses revealed that American sympathy cards contained fewer negative words (American mean = 2.90, SE = .79; German mean = 7.30, SE = .71), F(1, 710) = 17.35, p < .001, partial eta squared = .02) and more positive words (American mean = 3.50, SE = .33; German mean = 1.35, SE = .30), F(1, 710) = 23.51, p < .001, partial eta squared = .03, than German sympathy cards. However, American and German baby cards did not differ in negative (American mean = .04, SE = .94; German mean = .08, SE = .97; F[1, 710] = .00, *ns*) or positive (American mean = 5.68, SE = .39; German mean = 6.07, SE = .41; F[1, 710] = .47, ns) words.<sup>7</sup>

**Coding of Words.** Using the more elaborate manual text coding system for the sympathy cards, we assessed whether culture (US = 1, Germany = 2; we used Germany as the reference category) predicted whether or not the sympathy cards (1) acknowledged grief and suffering, and (2) included encouragement/a wish for something positive. We conducted two logistic regression analyses in which these two variables were regressed onto culture and number of words. As predicted, the American (versus the German) cards were less likely to acknowledge grief and suffering, B = -.76, SE = .38, p < .05, but were more likely to include encouragement, B = 2.56, SE = .30, p < .001.

<sup>&</sup>lt;sup>7</sup> We found the same results when we used the 2007 LIWC dictionary for the negative categories.
**Images.** A chi-square test of independence of culture by images revealed that American and German sympathy cards differed in the type of images on the cards,  $\chi 2[2, 444] = 50.44, p < .001$ . Even though a large percentage of the American (31.31%) and German sympathy cards (48.78%) were decorated with images other than dying or living ones, as predicted, significantly more German than American cards contained dying images (16.26% of German cards vs. 2.53% of American cards), whereas more American (66.16%) than German cards (34.96%) contained living images,  $\chi 2[1, 262] = 36.23, p < .001$ .

## Study 2 Summary and Discussion

As predicted, American sympathy cards had less negative and more positive content than German sympathy cards. These differences emerged when we examined the text as well as the images on the cards. These differences did not generalize to baby cards, suggesting that they are specific to negative events.

Interestingly, while German sympathy cards contained a greater percentage of negative words compared to positive words, American sympathy cards contained a similar percentage of positive and negative words (based on the LIWC analyses). However, when we examined the percentage of American sympathy cards that contained both negative content (either a dying image, or acknowledged grief, or both) <u>and</u> positive content (either a living image, encouragement, or both), only 8.59% of American sympathy cards (85.86%) contained only positive without any negative content. This suggests that although American sympathy cards contained an equal number of positive and negative words occurred against a backdrop of primarily positive feelings.

Findings from Studies 1 and 2 demonstrate that Germans want to avoid negative affect less than do Americans, and that they respond to another's suffering with more negative and less positive affect than do Americans. In Study 3, we examined whether there was a direct link between how much people want to avoid negative affect, and their responses to another person's suffering.

# Study 3: Do Cultural Differences in Avoided Negative Affect Mediate Cultural Differences in Responses to Suffering?

In Study 3, we assessed avoided affect, and presented European Americans and Germans with sympathy cards that either focused more on the negative or more on the positive. Because Study 1 revealed that European Americans wanted to avoid HAN, LAN, and N states more than did Germans, for parsimony, in Study 3, we collapsed across the three types of negative affect and created a general avoided negative affect score.

# Hypotheses

We predicted that: (1) European Americans would report wanting to avoid feeling negative more than would Germans, (2) European Americans would report feeling less comfortable sending sympathy cards that focus on the negative compared to Germans, and (3) cultural differences in avoided negative affect would mediate the cultural differences in the comfort rating of sympathy cards that focus on the negative.

# Method

# **Participants**

Ninety-seven European American students (63.92% female) and 93 German students (82.61% female) participated in this two-part online study. European Americans were born and raised, and had lived most of their life in the US. Additionally, both of their parents were of European descent. Germans were born and raised, and had lived most of their life in Germany. Additionally, both of their parents were of German descent. The two groups differed in gender distribution ( $\chi 2[1, 189] = 8.37, p < .01$ ) and age, with the German sample being more female and older (mean age = 24.00, SE = .33) than the European American sample (mean age = 22.18, SE = .32), *F* (1, 186) = 15.97, *p* < .001, partial eta squared = .08. Therefore, in our initial analyses, we included gender and age as covariates; however, because there were neither main effects nor interactions involving gender or age, we dropped gender and age from our final analyses. Participants received an \$8/Euro 6 Amazon gift certificate as compensation for completing the first part and

another \$12/Euro 10 Amazon gift certificate for completing the second part of the online study.

# Procedure

Participants were recruited via email announcements for a two-part "emotions and consumer products study" at large top-tier universities in the US and Germany. All measures of interest to this study were administered in the first part of the survey. European American participants completed all measures in English, and German participants completed all measures in German. Back-translation procedures were used to ensure equivalence of the measures. All participants completed the measures online at a place and time convenient for them.

# Instruments

Actual, Ideal, and Avoided Affect. As in Study 1, to assess actual, ideal, and avoided affect, the participants completed the AVI. As stated above, we collapsed across the specific types of negative affect (HAN, LAN, N) because group differences emerged for each type of negative affect in Study 1. Thus, we computed mean aggregate scores for the negative items (sad, unhappy, lonely, fearful, hostile, nervous, dull, sleepy, and sluggish). Internal consistencies (Cronbach's alphas) for ideal, actual and avoided negative affect were .72, .77, and .93 for Americans and .75, .80, and .90 for Germans. As in Study 1, compared to Germans, we found that Americans had a lower overall mean response to all actual affect items (American mean = 2.37, SE = .02; German mean =2.82, SE = .02; F(1, 187) = 185.50, p < .001, partial eta squared = .50) and ideal affect items (American mean = 2.36, SE = .02; German mean = 2.62, SE = .02; F(1, 187) = 115.48, p < .001, partial eta squared = .38), but a higher overall mean response to all avoided affect items (American mean = 3.02, SE = .05; German mean = 2.78, SE = .05; F(1, 186) = 10.11, p < .01, partial eta squared = .05). Therefore, we mean-deviated the scores; i.e., we subtracted each individual's overall mean response to all the avoided affect items from the raw score for each item, and then we calculated the mean aggregate score of avoided negative affect. We followed the same procedure for the actual and ideal negative affect.

**Rating of Sympathy Cards.** To assess how people respond to the suffering of another person, we created three pairs of cards based on the American and German sympathy cards in Study 2. Each pair contained one card that focused on the negative more, and one that focused on the positive more. We created cards that could be found in both cultures (with the colors neither being too bright nor too dull). Participants saw the three pairs successively, first rating each card in the pair and then choosing one of the cards from each pair. For each pair, the text on these cards was matched in length, overall theme (e.g., nature), and cover images so that the cards are depicted in Appendix A. We counterbalanced the order of the cards within each pair (while the order of the pairs themselves always remained the same), and we switched the background images on the covers of the cards within each pair. Because the order of the cards as well as the different background images did not influence our findings, we will not discuss this further.

Participants read the following instruction: "Please imagine that the father of one of your acquaintances just died, and you would like to send a card to this acquaintance. Please look at the cards below and rate how comfortable you would feel sending each card to your acquaintance." Then participants saw one pair of sympathy cards. Participants made their ratings on a 5-point scale ranging from 1 ("extremely uncomfortable") to 5 ("extremely comfortable") right after they saw each card. Finally, after participants rated both cards, participants were asked, "If you had to choose between the two cards above, which card would you send to your acquaintance?"

Although we created the cards, participants may have heard the phrases on the cards or seen the images on the cards before. Because familiarity increases liking (Zajonc, 2001), we assessed participants' familiarity with the cards in order to exclude cards with which participants were familiar. Specifically, participants indicated whether or not they had seen any of the images on the cards before, and whether or not they had heard any of the phrases on the cards.

We calculated the average rating of the three negative cards and the average rating of the three positive cards (excluding the card(s) for each participant that seemed familiar).<sup>8</sup> Internal consistencies (Cronbach's alphas) found for these aggregate scores for the three negative and three positive cards were .29 and .69 for Americans and .59 and .57 for Germans, respectively.<sup>9</sup> The very low value (.29) for Americans' aggregate for the negative cards reflects the restricted variance of the items in the American sample.

**Demographic Questionnaire.** Finally, participants completed a demographics questionnaire, which asked about gender, age, ethnicity, place of birth and upbringing, where they lived most of their life, as well as about their mothers' and fathers' culture. Because religion and belief in an afterlife might influence which type of sympathy cards people feel most comfortable sending, participants also indicated how religious they were on an eight point scale ranging from 0 ("not at all") to 7 ("very religious") and whether or not they believed in life after death.

# Analyses and Results

Prior to testing our hypotheses, we assessed whether there were differences between Americans and Germans regarding variables that might influence the rating of different sympathy cards. The two groups did not differ in how religious they were (European Americans: Mean = 2.90, SE = .21; Germans: Mean = 3.21, SE = .22; *F* (1, 179) = 1.07, *ns*) and whether or not they believed in life after death (European Americans: 43.48% believed in life after death; Germans: 54.02% believed in life after death;  $\chi 2[1, 179] = 1.99$ , *ns*).

<sup>&</sup>lt;sup>8</sup> The mean aggregate scores consisted of the ratings of either all the three cards (for 71.13% of Americans and for 58.06% of Germans), of just two (for 16.49% of Americans and for 32.26% of Germans), or just one card (for 9.28% of Americans and for 6.45% of Germans); 3.09% of Americans and 3.23% of Germans were excluded from the analyses because they indicated they were familiar with cards from all three pairs; these percentages did not differ between the two countries,  $\chi^2(3, 190) = 6.61$ , *ns*.

<sup>&</sup>lt;sup>9</sup> To examine whether the three comfort ratings of the three negative cards and those of the three positive cards loaded on separate factors, we conducted an exploratory factor analysis on those six ratings. The scree plot as well as the Kaiser criterion (eigenvalues should be greater than 1) suggested two factors, which accounted for 55.12% of the total variance. The comfort ratings of the three positive cards highly loaded on factor 1 and the comfort ratings of the three negative cards highly loaded on factor 2.

# Do Americans and Germans Differ in How Much They Want To Avoid Feeling Negative?

We conducted a univariate ANCOVA by Group (European Americans, Germans) for avoided negative affect, controlling for actual negative affect. As predicted, consistent with Study 1, and illustrated in Figure 5, European Americans wanted to avoid feeling negative more than did Germans (European Americans: Mean = 1.32, SE = .05; Germans: Mean = 1.15, SE = .05; *F* [1, 180] = 7.18, *p* < .01, partial eta squared = .04).

We also examined group differences in actual negative affect. We conducted a univariate ANCOVAs by Group (European Americans, Germans) for actual negative affect, controlling for avoided negative affect. European Americans actually felt negative states less than did Germans (European Americans: Mean = -.25, SE = .04; Germans: Mean = -.09, SE = .04; F [1, 185] = 8.10, p < .01, partial eta squared = .04). Contrary to Study 1, this effect was as large as that for avoided negative affect.

# Do Americans and Germans Differ in Their Rating and Choice of The Sympathy Cards?

To test our hypothesis, we conducted a 2 x 2 (Group: European Americans, Germans X Valence: mean rating of negative cards, mean rating of positive cards) repeated measures ANOVA with group as between-subjects factor and Valence as within-subjects factor. There was a significant main effect of Valence (F [1, 181] = 92.40, p < .001, partial eta squared = .34), but this was qualified by a significant Group X Valence interaction (F [1, 181] = 32.86, p < .001, partial eta squared = .15). As predicted, simple effects analyses revealed that Americans felt less comfortable sending the negative cards (Americans: Mean = 2.05, SE = .08; Germans: Mean = 2.64, SE = .08; F[1, 181] = 25.00, p < .001, partial eta squared = .12) and more comfortable sending the positive cards than did Germans (Americans: Mean = 3.22, SE = .10; Germans: Mean = 2.94, SE = .10; F [1, 181] = 3.10, p < .05, partial eta squared = .02), as illustrated in Figure 6. This suggests that Americans are not less comfortable sending <u>any</u> type of sympathy card, but only the ones that focus on the negative. This analysis also revealed that both European Americans and Germans felt more comfortable sending the positive than the negative cards (F [1, 181] = 121.04, p < .001, partial eta squared = .40 and F [1, [181] = 7.33, p < .01, partial eta squared = .04, respectively), but, as the effect sizes suggest, the effect was much larger for European Americans than Germans.

We also examined whether there were cultural differences in the percentage of participants who chose at least one (out of three) negative cards. Among Americans, only 36.56% chose at least one negative, whereas among the Germans, 72.22% chose at least one negative card,  $\chi 2(1, 183) = 23.43$ , p < .001.

# Does Avoided Negative Affect Mediate the Cultural Differences in Responses to Suffering?

To examine whether avoided negative affect mediated the relationship between culture and rating of the negative sympathy cards, we conducted a series of regression analyses (depicted in Figure 7) as outlined by Baron and Kenny (1986), Kenny, Kashy, and Bolger (1998), as well as MacKinnon, Lockwood, Hoffman, West, and Sheets (2002).

In Step 1, we regressed the mean rating of the negative cards, controlling for the mean rating of the positive cards, onto Group (Americans = 0, Germans = 1) (path c). As already described by the ANCOVA above, Germans felt more comfortable sending the negative cards,  $B_c = .67$ , SE = .11, t(180) = 5.90, p < .001, Cohen's  $f^2 = .27$  than did Americans. In Step 2, we regressed avoided negative affect on Group, controlling for actual negative affect (path a), given observed cultural differences in actual negative affect. As described above, Americans wanted to avoid feeling negative more than did Germans,  $B_a = -.17$ , SE = .07, t(180) = -2.68, p < .01, Cohen's  $f^2 = .05$ . In the third step, we regressed the mean rating of the negative cards onto avoided negative affect (path b) and group (path c'). We also entered actual negative affect and the mean rating of the positive cards as control variables. Above and beyond group differences, the more people wanted to avoid negative affect, the less comfortable they were sending the negative cards,  $B_b = -.27$ , SE = .13, t(177) = -2.12, p < .05. Furthermore, after entering avoided negative affect in the model (path c'), the effect of Group on the rating of the negative cards was reduced,  $B_{c'}$  = .60, SE = .12, t(177) = 5.16, p < .001, difference in coefficients test by Freedman and Schatzkin (MacKinnon et al., 2002):  $t_{Bc-Bc'}(181) = 3.04$ , p < .01, indicating that avoided negative affect partly mediated the cultural differences in the rating of the negative cards, as predicted.

We also tested the indirect effect of group on rating of the negative cards through avoided negative affect, using Preacher and Hayes' (2008) bootstrapping macro with 5,000 resamples. This indirect effect was estimated to lie between .003 and .116 with 95% confidence interval. Because this 95% confidence interval does not include zero, the indirect effect is significantly different from zero at p < .05. In line with the difference in coefficients test reported above, this suggests that avoided negative affect can partly explain American-German differences in the comfort rating of the negative cards.

We also performed a multiple regression analysis on the mean rating of the positive cards, entering avoided negative affect, actual negative affect, and the mean rating of the negative cards in one step. Avoided negative affect was not significantly related to the comfort rating of the positive cards, B = .21, SE = .16, t(178) = 1.29, ns. However, actual negative affect emerged as significant predictor, B = -.58, SE = .18, t(178) = -3.29, p < .01. To examine whether actual negative affect mediated the relationship between culture and rating of the positive sympathy cards, we conducted the same series of regression analyses as described for the mediation analysis above. In Step 1, we regressed the mean rating of the positive cards, controlling for the mean rating of the negative cards, onto Group (European Americans = 0, Germans = 1) (path c). As already described by the ANCOVA above, Germans felt less comfortable sending the positive cards than did European Americans,  $B_c = -.52$ , SE = .14, t(180) = -3.59, p < .001, Cohen's  $f^2 = .14$ . In Step 2, we regressed actual negative affect on Group, controlling for avoided negative affect (path a). As described above, Germans actually felt negative more than did Americans,  $B_a = .16$ , SE = .06, t(185) = 2.85, p < .01, Cohen's  $f^2 = .05$ . In the third step, we regressed the mean rating of the positive cards onto actual negative affect (path b) and group (path c'). We also entered avoided negative affect and the mean rating of the negative cards as control variables. Above and beyond group differences, the more people actually felt negative affect, the less comfortable they were sending the positive cards,  $B_b = -.49$ , SE = .18, t(177) = -2.81, p < .01. Furthermore, after entering actual negative affect in the model (path c'), the effect of Group on the rating of the positive cards was reduced,  $B_{c'}$  = -.45, SE = .15, t(177) = -3.12, p < .01, difference in coefficients test by Freedman and Schatzkin (MacKinnon et al., 2002):  $t_{Bc - Bc'}(187) = -$ 2.38, p < .05, indicating that actual negative affect partly mediated the cultural

differences in the rating of the positive cards. The indirect effect of group on rating of the negative cards through actual negative affect, using Preacher and Hayes' (2008) bootstrapping macro with 5,000 resamples was estimated to lie between -.187 and -.006 with 95% confidence interval. In line with the difference in coefficients test reported above, this suggests that actual negative affect can partly explain American-German differences in the comfort rating of the positive cards.

# Study 3 Summary

As predicted and in line with Study 1, we found that Americans wanted to avoid feeling negative states more than did Germans. As predicted, we also found that Americans felt less comfortable sending sympathy cards that focus on the negative compared to Germans. Our data suggest that Americans do not feel less comfortable sending sympathy cards in general, but only those that focus on the negative, as they actually felt more comfortable sending sympathy cards that focus on the positive compared to Germans. Finally, as predicted, we found that avoided negative affect partly mediated the cultural differences in the comfort rating of the negative sympathy cards.

Importantly, avoided negative affect was only related to the ratings of the negative cards. Thus, it functions as an "anti-goal" and makes people like the negative cards less. It does not make people like the positive cards more, suggesting again that approach and avoidance motivations are orthogonal.

Interestingly, while in Study 1, we found larger differences in avoided than actual negative affect, in this study, the cultural differences in actual negative affect were just as large as the differences in avoided negative affect. Why did we find the larger effect of culture on actual negative affect in Study 3 compared to Study 1? We conducted Study 3 in 2012 and Study 1 in 2007. While in 2007, both the US and Germany were equally affected by the global financial crisis, in 2012, Germans were much more influenced by the European sovereign-debt crisis compared to Americans. Thus, in 2012, the emotional climate was much worse in Germany than in the US, which could explain why Germans actually felt more negative and Americans less negative compared to Study 1. Thus, we should interpret the effect of culture on actual negative affect with this caveat in mind. Before concluding that culture might shape actual affect as much as avoided affect,

further research is needed. We also found that Germans felt less comfortable than Americans sending the positive cards and that actual negative affect partly mediated the cultural differences in the comfort rating of the positive sympathy cards. Again, this finding should be interpreted with the caveat in mind that the cultural differences in actual negative affect might be due to a financial crisis in one culture and thus be only temporary.

One limitation of this study and Study 1, however, is their correlational design. Consequently, we do not know the causal direction of the relationship between avoided negative affect and ratings of the negative sympathy cards. To examine whether there is a causal relationship, we conducted a series of experiments in which we manipulated the degree to which people wanted to avoid or approach negative affect and then examined what type of sympathy card they preferred to send.

#### Study 4: Does Avoided Negative Affect Influence Responses to Suffering?

In Study 4, we manipulated avoided negative affect using an adapted version of the "Approach-Avoidance Task" by Rinck and Becker (2007). In this task, using a joystick, participants are instructed to either *pull* negative images toward themselves (approach negative condition, which should make people want to approach feeling negative more), *push* them away (avoid negative condition, which should make people want to avoid feeling negative more), or *move* them right and left (control condition, which should not affect participants' motivational goals regarding negative affect). However, the participants never got a chance to actually pull, push, or move negative images as we programmed an error message into the task so that participants only prepared themselves to do the task, but never actually did the task. We did this to alter how much people want to avoid feeling negative, not how much people actually avoid feeling negative. We conducted the experiment in the US and in Germany to examine whether we find a causal relationship between avoided negative affect and responses to suffering in both cultures. In Study 4a, we examined whether the manipulation altered avoided negative affect. In Study 4b, we examined whether the manipulation altered comfort ratings of negative versus positive sympathy cards.

# Study 4a Hypotheses

We predicted that: (1) in both cultural samples, participants in the "avoid negative" condition would report wanting to avoid negative affect more than those in the "approach negative" and control condition, and (2) across conditions, Americans would report wanting to avoid feeling negative more than would Germans.

# Study 4a Method

# **Participants**

Sixty-four European American students (64.06% female; mean age= 21.30, SE = .54) and 32 German students (62.50% female; mean age= 23.70, SE = .78) participated in this study. Within the US and Germany, these students were randomly assigned to either the approach negative (US: n = 21; Germany: n = 10), the avoid negative (US: n = 22; Germany: n = 11), or the control condition (US: n = 21; Germany: n = 11). For Americans and Germans separately, between the three conditions, there were no differences in gender ( $\chi 2$  [2, 63] = 4.81, *ns* and  $\chi 2$  [2, 31] = 4.67, *ns*, respectively). For age, we found neither a significant main effect of condition (*F* [2, 89] = .15, *ns*) nor a significant culture by condition interaction (*F* [2, 89] = .20, *ns*), but Germans were significantly older than Americans across all three conditions, *F* [1, 89] = 6.34, *p* < .05, partial eta squared = .07. Therefore, we controlled for age in the analyses below when it emerged as significant covariate.

# **Task and Instruments**

American participants received all instructions and measures in English. German participants received all instructions and measures in German. Back-translation was used to ensure equivalence of the procedure and measures.

**Joystick Task.** We adapted the "Approach-Avoidance Task" (Rinck & Becker, 2007) for our purposes. Participants were told that they would be assigned to one of three conditions: (1) to *pull* the joystick toward themselves when they saw a negative image ("approach negative" condition), (2) to *push* the joystick away from themselves when they saw a negative image ("avoid negative" condition), and (3) to *move* the joystick right and left when they saw a negative image (neutral control condition). The experimenter modeled the instructions for each task with three different negative images

selected from the International Affective Picture Set (IAPS; Lang, et. al., 1970). These three images were chosen based on the lowest affective valence level of all of the photos available in the IAPS 2007 (we excluded pictures with overly disturbing content [e.g. mutilation] and culturally specific content [e.g. KKK rallies]). Only after the participants saw all three possible reactions to negative images on the screen (i.e., pull, push, move) were participants assigned to one of three conditions and told which condition they are assigned to. Because we were interested in manipulating participants' goals, participants never actually engaged in the task.

**Momentary Avoided and Actual Affect.** Instead of asking participants how often they want to avoid feeling different states over the course of a typical week (as we did in Study 1 and 3), we asked them how much they wanted to avoid feeling and how much they actually felt different states <u>at the moment</u> to test whether our manipulation influenced avoided negative affect. Participants made their ratings on a 5-point scale ranging from 1 ("not at all") to 5 ("extremely"). Participants rated avoided affect before actual affect. As in Study 3, we computed mean aggregate scores for the negative items for actual and avoided affect (sad, unhappy, lonely, fearful, hostile, nervous, dull, sleepy, and sluggish). To maintain consistency with Studies 1-3, responses were mean deviated within each individual by subtracting each individual's overall mean response to all the actual/avoided affect items from the raw score for each item, and then we calculated the mean aggregate score of actual/avoided negative affect. Internal consistencies (Cronbach's alphas) for actual and avoided negative affect were .84 and .88 for European Americans and .84 and .93 for Germans, respectively.

# Procedure

In the US, participants were recruited from a large top-tier university via a website offering students research credit for a large introductory psychology class or a \$9 Amazon gift certificate. In Germany, participants were recruited from a large top-tier university via email announcements and flyers offering them a Euro 7 Amazon gift certificate. The study was advertised as a "reaction time and consumer products study".

When participants arrived at the lab, they were greeted by the experimenter (a European American female student for American participants and a German female student for German participants), seated in front of a computer that had a joystick

attached to it, and then asked to complete the consent form as well as two questions about their current mood. Participants were then introduced to the task and were read the following instructions on the computer screen:

"Welcome to this reaction time task!

On the computer screen, we will show you different images one by one. Whenever you see a NEGATIVE image, your task is to move the joystick as quickly as possible.

You will either

- PULL the joystick TOWARD YOURSELF,

- PUSH the joystick AWAY FROM YOURSELF or

- MOVE the joystick RIGHT AND LEFT.

PULLING the joystick toward yourself will make the image BIGGER.

PUSHING the joystick away from yourself will make the image SMALLER.

MOVING the joystick right and left will make the image stay the SAME SIZE." While the experimenter read the last three sentences, she made the pulling, pushing, and right and left movements with the joystick for the participant to see. Then she continued to read:

"Please respond to each image as quickly as possible.

Now the experimenter will demonstrate this task for you."

A negative image appeared on the screen and the experimenter pulled the image towards herself and said "PULLING the joystick toward yourself will make the image BIGGER." Then another negative image appeared on the screen and the experimenter pushed the image away from herself while saying "PUSHING the joystick away from yourself will make the image SMALLER." Finally, a third negative image appeared on the screen and the experimenter moved the joystick left and right while saying "MOVING the joystick right and left will make the image stay THE SAME SIZE". Participants were also told not to do anything when the image was not negative.

Participants were then randomly assigned to one of three conditions, in which the experimenter said, without doing any movements with the joystick, (1) "Whenever you see a negative image, please PULL the joystick TOWARD yourself to make the image BIGGER" [approach negative], (2) "Whenever you see a negative image, please push the

joystick AWAY from yourself to make the image SMALLER" [avoid negative], and (3) "Whenever you see a negative image, please move the joystick LEFT AND RIGHT to make the image STAY THE SAME SIZE" [neutral control].

After the experimenter delivered the instructions, an error message appeared on the screen suggesting that the server had run out of memory. Participants were told that it would take a few minutes to resolve the problem, and that they should prepare themselves for the task "by thinking about what you need to do when you see a negative image." The experimenter played with the computer for one minute, and then told the participant that she could start completing the other measures for the study (see Appendix B for a detailed description of the experimental procedure with the exact wording used in the task and in the instructions by the experimenters). After participants completed the AVI, participants were debriefed about the study.

#### Study 4a Data Analysis and Results

To examine whether we were successful in our random assignment, we examined the emotional state of our participants at the beginning of the study. We conducted a 2 (Culture: US, Germany) x 3 (Condition: avoid negative, approach negative, control) x 2 (valence: negative feelings, positive feelings) repeated measures ANOVA with culture and condition as between-subjects factors and valence as within-subjects factor. The only significant effect that emerged was a main effect of valence. Across both cultural groups and all three conditions, participants felt more positively (mean = 3.76, SD = .75) than negatively (mean = 1.79, SD = .81) at the beginning of the study, F [1, 89] = 190.30, p <.001, partial eta squared = .68. Because we did not find any differences between conditions, we assumed that we were successful in our random assignment.

To test our hypotheses, we conducted a 2 (Culture: US, Germany) x 3 (Condition: avoid negative, approach negative, control) ANCOVA for avoided negative affect, controlling for actual negative affect and age. A significant main effect of Culture (*F*[1, 87] = 21.05, *p* < .001, partial eta squared = .20) and Condition (*F*[2, 87] = 4.28, *p* < .05, partial eta squared = .09) emerged, but they were qualified by a significant Culture by Condition interaction (*F*[2, 87] = 3.40, *p* < .05, partial eta squared = .07). As predicted and depicted in Figure 8, simple effects analyses revealed that in the German sample,

participants differed between conditions in how much they wanted to avoid feeling negative, F(2, 87) = 4.79, p < .05, partial eta squared = .10. As predicted, participants wanted to avoid feeling negative in the "avoid negative" condition significantly more (mean = 1.13, SE = .12) than participants in the "approach negative" condition (mean = .60, SE = .12), p < .01. However, participants in the control condition (mean = .84, SE = .12) did not differ from participants in the avoid or approach negative condition (both ps> .09). Surprisingly, in the American sample, participants did not differ between conditions in how much they wanted to avoid feeling negative (approach negative condition: mean = 1.17, SE = .08; avoid negative condition: mean = 1.22, SE = .08; control condition: mean = 1.39, SE = .08), F(2, 87) = 1.83, ns.

Next, we examined whether across conditions, Americans would report wanting to avoid feeling negative more than would Germans. We conducted a univariate ANCOVA by Culture (Americans, Germans) for avoided negative affect, controlling for actual negative affect and age. As predicted, across conditions, Americans wanted to avoid feeling negative states more than did Germans (Americans: Mean = 1.26, SE = .05; Germans: Mean = .86, SE = .08; F [1, 91] = 19.33, p < .001, partial eta squared = .18).

We also examined whether participants in the two countries and three conditions differed in their actual negative affect. Thus, we conducted a 2 (country: US, Germany) x 3 (condition: avoid negative, approach negative, control) ANCOVA for actual negative affect, controlling for avoided negative affect (age was not a significant covariate). No significant main effects or interactions were found (all ps > .17). Thus, we were successful in selectively manipulating avoided negative affect with this task among Germans.

## Study 4a Discussion

To summarize, for Germans, we can alter how much they want to avoid feeling negative by only preparing them to push negative images away or pull them closer. People in the avoid negative condition wanted to avoid feeling negative more than people in the approach negative condition, while the groups did not differ in how negatively they actually felt. Furthermore, in line with our findings from Studies 1 and 3, across all three conditions, we again found that Americans wanted to avoid feeling negative more than did Germans.

However, we were only able to manipulate avoided negative affect among German participants, not American participants. To make sure that this manipulation really did not alter avoided negative affect among Americans, as our sample sizes suggest, we ran more European Americans to increase power after we did not get an effect with 30 European American participants. But even after we doubled the sample size, we did not find a condition effect among Americans. A possible explanation for this finding is that we encountered a ceiling effect in the American sample. When looking at the means of the American participants in all three conditions, we can see they are higher than the means in all three conditions for the German sample. Because we used mean deviated the scores, we could not determine whether we were seeing a ceiling effect. Therefore, we examined the mean of avoided negative affect across all three conditions on the original 1-5 scale before subtracting the mean of all avoided affect ratings. For Americans, the mean was 4.12 (SE = .10), whereas it was 3.12 (SE = .14) for Germans. Furthermore, 64.06% of Americans had a mean of 4 or higher, while only 21.87% of Germans had a mean of 4 or higher. Thus, the distribution of avoided negative affect means is highly negatively skewed for Americans (skewness less than -1.00; Bulmer, 1979), whereas this is not the case for the German sample (skewness = -.01). We divided the sample skewness by the standard error of skewness to get the test statistic Z measuring how many standard errors the sample skewness is from zero (Cramer, 1997). For Americans, Z was -3.35, suggesting that the population is very likely skewed negatively. For Germans, Z was only -.02. This strongly suggests a ceiling effect of avoided negative affect in the American sample, making it hard for any intervention to increase these scores as they are already at its maximum. This ceiling effect is in line with the consistent finding of this paper that Americans highly want to avoid feeling negative. Because Germans do not want to avoid feeling negative as much, there is more room to alter their avoided negative affect (in both directions).

We manipulated avoided negative affect not only by asking participants to push negative images away, but also by asking participants to pull negative images closer. Only when we compared those two conditions did we get the predicted effect. Just

instructing people to push negative images away did not result in a change of avoided negative affect compared to baseline (the control condition). We anticipated that we might manipulate ideal negative affect in the approach negative condition, but our findings suggest that, in the German sample, ideal negative affect did not change. In the American sample, ideal negative affect had a very low Cronbach's alpha (.20), which is why we did not examine it. Thus, it seems that this task only alters avoided negative affect, despite the fact that it also uses the instruction to pull negative images closer (an approach instruction).

One could ask why for Americans, we could not <u>decrease</u> how much they wanted to avoid feeling negative affect either. While we saw a slight decrease of avoided negative affect in the approach negative condition for Americans, the value did not significantly differ from the control or the avoid negative condition. A possible explanation could be that American culture emphasizes the avoidance of negative states to such a great extent that it is hard to decrease that motivation. In order to make Americans avoid feeling negative less, they might need a stronger manipulation of avoided negative affect. We examined this possibility in Studies 5a and 5b.

Now that we know we can alter how much Germans want to avoid feeling negative by just manipulating their motivational goal, we wanted to examine whether the motivation to avoid negative affect directly causes differences in responses to suffering in a German sample. To assess how participants respond to the suffering of another, we asked participants to rate and choose from the same sympathy cards we created for Study 3. To increase the external validity of these ratings and choices, we told our participants before they made their ratings and choices that we would randomly select one of the cards that they chose and give it to them at the end of the study. Because we wanted our participants to actually have a card they can use, we included a pair of thank you cards in the present study and, unknowingly to the participants during the study, always gave our participants the thank you card they chose while answering the survey.

# Study 4b Hypotheses

Using the experimental manipulation that we tested in Study 4a, we predicted that participants in the approach negative condition would feel more comfortable sending

negative sympathy cards to an acquaintance who just lost his/her father compared to people in the avoid negative condition. We ran this study in Germany because we were successful at manipulating avoided negative affect with the manipulation described in Study 4a in a German sample.

# Study 4b Method

# Participants

Fifty-eight German students (72.41% female, mean age = 23.74, SE = .42) participated in this study. These students were randomly assigned to either the approach negative (n = 19), the avoid negative condition (n = 20), or the control condition (n = 19). Between the three conditions, there were no differences in gender ( $\chi 2$  [2, 58] = 5.62, *ns*) or age (*F* [2, 55] = .08, *ns*).

# Instruments

Rating of Sympathy and Thank You Cards. To increase the ecological validity of the study, before making their ratings and choices, participants read that we would randomly select one of the cards that they chose while answering the survey and they would receive that card at the end of the study. However, instead of randomly selecting a sympathy card that participants chose, we added a pair of thank you cards and always selected the thank you card that people chose so that participants would have a card that they were more likely to use. To examine participants' consistency of their choice of cards in the survey and in real life, we compared whether participants chose the same card when the experimenter presented the pair of thank you cards compared to what they chose in the survey.

Participants were asked to imagine that the father of one of their acquaintances just died and they would like to send a card to this acquaintance RIGHT NOW. Participants then indicated how comfortable they would feel sending four different sympathy cards (the first four cards depicted in Appendix A, in that one order) presented on the computer screen to their acquaintance RIGHT NOW. As in Study 3, the cards were presented in pairs, each containing one positive and one negative card. Participants made their rating on a 5-point scale ranging from 1 ("extremely uncomfortable") to 5 ("extremely comfortable") right after they saw each card. In line with Study 3, we

calculated the average rating of the negative cards and the average rating of the positive cards.

After rating these sympathy cards, we presented our participants with two different thank you cards. Participants were asked to imagine that they would like to send a thank you card RIGHT NOW to one of their acquaintances who did them a favor. Then they were asked how comfortable they would feel sending each card using the same 5-point scale they used for the sympathy cards. For both the sympathy and thank you cards, participants also indicated which card they would choose.

# Procedure

Participants were recruited via email announcements and flyers offering them a Euro 7 Amazon gift certificate at a large top-tier university in Germany. Like Study 4a, the study was advertised as a "reaction time and consumer products study".

When participants arrived at the lab, they followed the exact same procedure as described in Study 4a. However, right after the participants encountered the error in the reaction time task and the experimenter told them to continue with the second part of the study, instead of completing the AVI, participants rated the sympathy and thank you cards.

At the end of the study, the experimenter presented participants with the two thank you cards they saw in the survey and asked them which card they chose in the survey. The experimenter then gave them the card they chose to keep and made a note of the participant's choice.

# Study 4b Results and Discussion

To examine whether we were successful in our random assignment, we examined the emotional state of our participants at the beginning of the study. Participants did not differ in how negatively they felt at the beginning of the study in the three conditions (mean = 1.87, SE = .12; F [2, 52] = .41, *ns*). However, they did differ in how positively they felt at the beginning of the study, F(2, 52) = 3.14, p = .05, partial eta squared = .11. Simple contrast analyses revealed that participants in the approach negative condition felt significantly more positive (mean = 4.11, SE = .18) than participants in the control condition (mean = 3.47, SE = .18), p < .05. However, participants in the avoid negative condition (mean = 3.71, SE = .19) did not differ from participants in the approach negative or the control condition, all ps > .13. Therefore, we controlled for positive feelings at the beginning of the study in the analyses described below. Furthermore, all participants but one (98.25%) chose the same card at the end of the study that they chose while completing the survey, suggesting good ecological validity of our measure.

To test our hypothesis, we conducted a univariate ANCOVA by condition for the rating of the negative cards, controlling for the rating of the positive cards and positive feelings at the beginning of the study. We used simple planned contrasts to directly test our hypothesis. As predicted and depicted in Figure 9, participants in the approach negative condition (mean = 2.78, SE = .18) felt more comfortable sending the negative cards compared to participants in the avoid negative condition (mean = 2.21, SE = .18), t(50) = -2.20, p < .05. Participants in the approach negative or the avoid negative condition did not differ from participants in the control condition (mean = 2.55, SE = .18), t(50) = -.86, *ns* and t(50) = -1.35, *ns*, respectively, suggesting that both active conditions were needed for the predicted effect to occur.

We also examined whether participants in the three different conditions differed in their rating of the positive cards. We conducted a univariate ANCOVA by condition for the rating of the positive cards, controlling for the ratings of the negative cards and positive feelings at the beginning of the study. None of the simple planned contrasts were significant (all ps > .16), suggesting that avoided negative affect causes specific differences in how people rate sympathy cards with negative content, not any type of sympathy cards.

# Study 5: Does a Stronger Manipulation of Avoided Negative Affect Influence Responses to Suffering in an American Sample?

Findings from Study 4a suggest that a manipulation of avoided negative affect, during which we only manipulate participants' motivation to approach or avoid negative images, was not effective in altering avoided negative affect in an American sample. Therefore, we wanted to examine whether a stronger manipulation, during which participants actually engage in the movement of pushing negative images away or pulling them closer would alter avoided negative affect in American participants (Study 5a). If so, we also wanted to examine if we find a causal relationship between avoided negative affect and responses to suffering in an American sample (Study 5b). Because our findings from Study 4a suggest that we need the two active conditions (i.e., approach and avoid negative) to reach a significant difference in how much people want to avoid feeling negative even in a German sample, we focused on the two active conditions. Additionally, instead of having participants rate positive and negative cards, immediately after the manipulation, participants chose one of two sympathy cards. This "joint evaluation mode" (Hsee, Loewenstein, Blount, & Bazerman, 1999) makes it easier for participants to see the differences between the two cards, making the difference in emotional focus more salient. Finally, in addition to European Americans, we also included other Americans in the last study to examine whether this manipulation works for them as well. Study 5a tested the effectiveness of the manipulation, and Study 5b examined the effects of the manipulation on card choice.

# Study 5a Hypotheses

We predicted that participants in the "avoid negative" condition would report wanting to avoid negative affect more than those in the "approach negative" condition.

# Study 5a Method

# **Participants**

Thirty-two American students (48.39% European American, 32.26% Latino American, 19.35% other American; 62.50% female; mean age= 18.97, SE = .17) participated in this study. These students were randomly assigned to either the "approach negative" (n = 14) or the "avoid negative" condition (n = 18). Between the two conditions, there were no differences in gender ( $\chi 2[1, 32] = .31, ns$ ), ethnicity (European American vs. all other ethnicities: ( $\chi 2[1, 32] = .10, ns$ ) or age (F[1, 30] = .35, ns). In our initial analyses, we included ethnicity as factor; however, because there were neither main effects nor interactions involving ethnicity, we dropped ethnicity from our final analyses.

# **Task and Instruments**

**Joystick Task.** As described above, we adapted the "Approach-Avoidance Task" (Rinck & Becker, 2007) for our purposes by creating two conditions: In the approach negative condition, when participants saw a negative image, they were asked to *pull* the negative image toward themselves. The image then grew physically on the screen as if it was pulled closer until it vanished. When a neutral image was shown to the participants, they were asked to push the image away. The image then shrank physically on the screen until it vanished. In the avoid negative condition, when participants saw a negative image, they were asked to *push* the negative image away. The image then shrank physically on the screen as if it was pushed away until it vanished. When a neutral image was shown to the participants, they were asked to *push* the negative image away. The image then shrank physically on the screen as if it was pushed away until it vanished. When a neutral image was shown to the participants, they were asked to pull the image to push the image then grew physically on the screen until it vanished. When a neutral image was shown to the participants, they were asked to pull the image toward themselves. The image then grew physically on the screen until it vanished.

The image set for the actual experiment included 33 negative images and 33 neutral images selected from the International Affective Picture Set (IAPS; Lang, et. al., 1970). The images were matched for content, with each set consisting of 18 photos of people and 15 of objects. Negative images were selected on the basis of the lowest affective valence level of all of the photos available in the IAPS 2007 with overly disturbing content (e.g. mutilation) and culturally specific content (e.g. KKK rallies) removed. Neutral images were selected on the basis of mid-range affective valence level.

Actual, Ideal, and Avoided Affect. As in Study 4a, participants completed the momentary version of the AVI by first completing the avoided version, then the actual version.

As in the previous studies we computed mean aggregate scores for the negative items for avoided and actual affect (sad, unhappy, lonely, fearful, hostile, nervous, dull, sleepy, and sluggish). Furthermore, in line with our previous studies, responses were mean deviated within each individual by subtracting each individual's overall mean response to all the avoided/actual affect items from the raw score for each item, and then we calculated the mean aggregate score of avoided/actual negative affect. Internal consistencies (Cronbach's alphas) for avoided and actual negative affect were .84 and .78, respectively.

# Procedure

Participants were recruited via a website offering students research credit for a large introductory psychology class at a large top-tier university in the US. When participants arrived at the lab, they were greeted by the experimenter, seated in front of a computer that had a joystick attached to it, and then asked to complete the consent form as well as two questions about their current mood.

Participants were then introduced to the task. They read the following instructions on the computer screen:

"Welcome to this reaction time task!

On the computer screen, we will show you many images one by one.

For each image, your task is to move the joystick as quickly as possible. To do so, you pull the joystick toward yourself or you push it away from yourself. Whether you should pull or push depends on the image."

In the "approach negative" condition, participants were told, "For NEGATIVE images, PULL the joystick TOWARD yourself. For NEUTRAL images, PUSH the joystick AWAY from yourself." In the "avoid negative" condition, participants were told, "For NEGATIVE images, PUSH the joystick AWAY from yourself. For NEUTRAL images, PULL the joystick TOWARD yourself." After 20 practice trials, during which different IAPS images were used than for the actual trials, the participant started with the actual experiment, which comprised of 132 trials.

Each picture was presented to the participant twice in a standard random order ([33 negative + 33 neutral images] \* 2 = 132 trials). However, no more than three images of the same valence could occur successively. At the beginning of each trial, the participants saw an image of medium size on the computer screen. Then, depending on whether they pushed or pulled the joystick, this image shrank or grew in size. Following the task, participants completed the AVI.

# Study 5a Data Analyses and Results

To examine whether we were successful in our random assignment, we examined the emotional state of our participants at the beginning of the study. Participants in the two conditions did not differ in how negatively (mean = 2.13, SE = .16) or positively (mean = 3.53, SE = .16) they felt at the beginning of the study, F[1, 28] = .03, *ns* and F[1, 28] = .43, *ns*, respectively, suggesting we were successful in our random assignment.

To test our hypotheses, we conducted a univariate ANCOVA by Condition (Approach negative, Avoid negative) for avoided negative affect, controlling for actual negative affect. As predicted and shown in Figure 10, participants in the avoid negative condition wanted to avoid feeling negative states more than participants in the approach negative condition (Avoid negative: Mean = 1.42, SE = .12; Approach negative: Mean = .95, SE = .14; *F* [1, 29] = 6.55, *p* < .05, partial eta squared = .18).

We also examined whether participants in the two conditions differed in their actual negative affect. We conducted a univariate ANCOVA by Condition on actual negative affect, controlling for avoided negative affect. Participants in the two conditions did not significantly differ in how much they actually felt negative (Avoid negative: Mean = -.02, SE = .11; Approach negative: Mean = -.12, SE = .13; F [1, 29] = .36, *ns*). Thus, we were successful in selectively manipulating avoided negative affect among Americans with this task.

#### Study 5b Hypotheses

Using the experimental manipulation that we tested in Study 5a, we predicted that people in the approach negative condition would be more likely to choose a negative over a positive sympathy card compared to people in the avoid negative condition, when asked which card they would rather send to an acquaintance whose father just died.

# Study 5b Method

# **Participants**

Forty-four American students (44.19% European American, 13.95% Latino American, 41.86% other American; 58.14% female; mean age = 18.83, SE= .22) participated in this study. These students were randomly assigned to either the approach negative (n = 20) or the avoid negative condition (n = 24). Between the two conditions, there were no differences in gender ( $\chi 2[1, 43] = .15$ , *ns*), ethnicity (European American vs. all other American:  $\chi 2[1, 44] = 1.00$ , *ns*) or age (*F* [1, 40] = .34, *ns*). In our initial analyses, we included ethnicity as predictor; however, because there were neither main effects nor interactions involving ethnicity, we dropped ethnicity from our final analyses.

# **Procedure and Instruments**

Participants were recruited via a website offering students research credit for a large introductory psychology class at a large top-tier university in the US. Again, the study was advertised as a "reaction time and consumer products study". When participants arrived at the lab, they followed the same procedure as described in Study 5a. However, right after the participants completed the reaction time task, instead of completing the AVI, participants were asked to imagine that the father of one of their acquaintances just died, and to imagine that they would like to send a card to this acquaintance right now. Then participants were presented with one positive and one negative sympathy card (in that order) on the computer screen. The positive card contained the words "With sympathy. What power memories have to heal the heart and nurture the soul. Hoping that, in time, your warmest memories will lead you to a place of comfort and peace." The negative card contained the words "In the loss of your loved one. When you lose someone you love, it always takes some time to cope with all the sadness and the changes you go through. With deepest sympathy." Then participants were asked which card they would send to their acquaintance right now if they had to choose between the two cards. Right after that, participants were presented with another pair of sympathy cards and asked to choose which one they would send. This time, the negative card was presented first. The negative card contained the words "Thinking of you at this difficult time. No one truly comprehends the loss that you feel, the sadness that you must be going through... With sympathy and understanding." The positive card contained the words "As you remember your loved one. May the memory of the smile warm you like the sun. May the memory of the laughter echo in your heart. May the light of your best memories enrich all of your days. With caring thoughts and sympathy."

# Study 5b Results and Discussion

To examine whether we were successful in our random assignment, we examined the emotional state of our participants at the beginning of the study. Participants in the two conditions did not differ in how negatively (mean = 1.79, SE = .14) or positively

(mean = 3.89, SE = .14) they felt at the beginning of the study, F[1, 39] = .13, *ns* and F[1, 39] = .50, *ns*, respectively, suggesting we were successful in our random assignment.

To test our hypothesis, we performed a chi-square test of independence for both card choices of condition by type of card chosen. As hypothesized, for the first choice, more participants in the approach negative condition (30.00%) chose the negative card compared to those in the avoid negative condition (4.17%),  $\chi 2[1, 44] = 5.44$ , p < .05, see Figure 11. Again as hypothesized, for the second choice as well, more participants in the approach negative condition (35.00%) chose the negative card compared to those in the avoid negative condition (35.00%) chose the negative card compared to those in the avoid negative condition (8.70%),  $\chi 2[1, 43] = 4.47$ , p < .05, see Figure 11.

Our results demonstrate that we were able to manipulate avoided negative affect among Americans only by having them engage in the practice of pulling negative images closer or pushing them away. It is interesting that Americans have to engage in the practice of pulling negative images closer in order for them to want to avoid negative affect less. The desire to avoid negative affect seems to be omnipresent in the American culture and changing it seems to require a process similar to people moving to a new culture: Only by engaging in new behaviors (e.g., the cultural practice of approaching negative states) can one adopt new goals and values to become "acculturated" and fit in with a new society (Berry, 1997).

# **General Discussion**

Our studies suggest that avoided negative affect is a useful extension of AVT as it is separate from ideal and actual negative affect and, as ideal affect, is more influenced by culture than actual negative affect. Specifically, European Americans want to avoid feeling negative states more than do Germans. This finding emerged in two questionnaire studies when we measured avoided affect at the global level and in one experimental study, when we measured avoided affect at the momentary level, suggesting that this cultural difference is pervasive. The desire to avoid negative affect seems to be so strong and persistent in the American culture that we had to use a stronger manipulation to change avoided negative affect than the one we used among Germans. In fact, we found evidence for our assumption that the original manipulation did not work because of a ceiling effect of avoided negative affect in the American culture, highlighting again how

much Americans want to avoid feeling negative. Other researchers also have suspected ceiling effects from preventing certain experimental manipulations to work for certain subgroups and found that different manipulations might be more beneficial for certain cultural groups than others (e.g., Shechter, Durik, Miyamoto, & Harackiewicz, 2011).

By comparing how much European Americans and Germans want to avoid feeling negative, we added to the literature on cultural differences in views of negative emotions. Previous literature has been limited in that only a handful of studies have examined how culture shapes views of negative emotions. Of the three published studies that do, one (Eid & Diener, 2001) did not differentiate between the emotions people want to approach and those they want to avoid. The other two (Izard, 1971; Sommers, 1984) did not assess the degree to which people want to approach or avoid emotions. Our research fills this gap in the literature by examining how much people want to avoid feeling negative and by suggesting that AVT is a useful framework for examining cultural differences in the emotions people want to approach ("ideal affect") and those they want to avoid ("avoided affect").

What consequences do these cultural differences in avoided negative affect have? By using multiple methodologies (surveys, archival, and experiments), we found that when responding to someone's suffering, European Americans focus more on the positive and less on the negative compared to Germans. Furthermore, we found that the cultural differences in avoided negative affect led to the cultural differences in responses to suffering. More specifically, the more people want to avoid feeling negative, the less comfortable they feel sending sympathy cards that focus on the negative.

# **Limitations and Current Directions**

One question that remains is which aspects of the American and German culture brings about the differences in avoided negative affect. Based on the different histories of American and German societies discussed above ("American Frontier" Spirit; Turner & Abbe, 1893 vs. "Homeland Spirit"), we are currently investigating whether Germans want to avoid negative emotions less than European Americans do because they might be more accepting of life's circumstances compared to European Americans. In this paper, we began our investigations with an American-German comparison in avoided negative

affect and responses to suffering. Future research should extend this work to other cultures and should examine regional differences within the US and Germany.

As a consequence of the cultural differences in avoided negative affect, we examined how people respond to the suffering of another. Certainly, future research should examine other behavioral consequences. For instance, does avoided negative affect shape how people grieve? We would predict that the more people want to avoid feeling negative, the more they would want to distract themselves from the source of their grief. Also, does avoided negative affect shape how people would like others to respond to their own suffering? We have started to examine this (for a write up of the results, see Appendix C).

Carver and Scheier (1998) argue that a discrepancy enlarging process (which pushes behavior away from what is unwanted) is often accompanied by a discrepancy reducing process (which pushes a behavior in a certain direction). For avoided affect, it will be interesting to see whether it is often accompanied by a certain (more directive) ideal positive affect or whether avoided negative affect simply results in behavior, which might bring one into a neutral state. Individual and cultural differences will most likely be important in answering this research question. Future studies should also examine the boundary conditions in which avoided negative affect no longer predicts behavior and when ideal positive affect is more predictive. It is possible that avoided negative affect is more important in situations in which people already feel negative affective states or are anticipating feeling negative, whereas ideal positive affect might be more important when people are in a neutral state.

In a similar vein, it will be important to examine situational influences on avoided negative affect. There might be certain situations when people want to avoid feeling negative states more (e.g., a wedding) or less (e.g., a funeral). Future research should examine such situational variation and investigate whether similar situations lead to similar changes in avoided negative affect across cultures.

Furthermore, future studies should examine how avoided negative affect shapes actual negative affect and vice versa. Is feeling bad worse for people who strongly want to avoid feeling negative than for people who do not want to avoid feeling negative as much? It is possible that the desire to avoid feeling negative is associated with people

having many negative associations with actually feeling negative, which might make actually feeling negative worse for them than for people who do not want to avoid feeling negative as much. Avoided negative affect might even influence people's rating of their actual negative affect. We did find in our studies that Americans reported actually feeling negative affect less compared to Germans. Are these true differences in actual negative affect or are people who strongly want to avoid feeling negative more hesitant to report actually feeling negative despite their feeling negatively?

Another topic that would be very fruitful to investigate in the future is how cultural norms about wanting to avoid feeling negative relate to well-being, health and the diagnosis of mental illness. It is possible that in cultures that highly want to avoid feeling negative affect, depression is more easily diagnosed. Several mechanisms are possible: First, as mentioned above, for people who want to avoid feeling negative more, actually feeling negative affect might be worse than for people who want to avoid feeling negative less. Because of this, people who want to avoid feeling negative more might go to a doctor more readily and be diagnosed with depression more easily than people for whom feeling negative is not as bad. There is some evidence suggesting that depression is more often diagnosed in the US compared to Germany (Bromet et al., 2011) and that antidepressants are used more often in the US than in Germany (e.g., Zito et al., 2008).

Second, it is possible that cultures that want to avoid feeling negative more develop diagnostic instruments with laxer criteria for depression compared to cultures who want to avoid feeling negative less. With the development of the new Diagnostic and Statistical Manual of Mental Disorders (DSM-V), which was spearheaded by the American Psychiatric Association, some debate emerged about the exclusion criterion for bereavement for a major depressive episode. Especially clinicians and scientists in Europe were upset that this exclusion criterion might vanish. A German newspaper stated that people who are grieving must not be labeled as ill (Simon, 2011). Thus, this debate among psychiatrists and scientists from different cultures illustrates cultural differences in how much negative affect is "normal" and accepted and when treatment should begin. Avoided negative affect might explain these differences.

### **Implications**

This line of research has numerous applications. For instance, our findings challenge the assumption that what is regarded as "helpful" in one culture will automatically be regarded as "helpful" in other cultures. Before we compare helping responses to suffering and compassion cross-culturally, we need to understand what is regarded as compassionate in a certain cultural context. It would be dangerous to label one culture as less compassionate than another only because that culture does not exhibit as much of one type of responses to suffering. This research once again reminds us that we cannot just use our own concepts to study a certain topic in a different culture. We first need to understand how the other culture conceptualizes what we are trying to study.

But it is not just the compassionate response per se that might be culturally shaped. The motivations that bring about compassionate responses might also be influenced by culture. In fact, American dominant models of compassion and empathy might not apply in German contexts and other contexts that want to avoid negative affect less. While Americans might help others to reduce their own distress, Germans might be less inclined to reduce their own distress because they want to avoid feeling negative less. Thus, the motivation to reduce one's own distress might be less relevant in German contexts for empathic responses to occur. Other motivations might be more important.

What is striking is that we find sizable differences between two cultures that are usually perceived as very similar: The American and German culture are two Western individualistic cultures, yet they differ in how much they want to avoid negative emotions and how they respond to suffering. It is important for (cross-)cultural psychology to not only focus on cultures differing on individualism-collectivism, but on other cultures differing on other dimensions as well. We might find differences just as large between two Western cultures compared to Eastern and Western cultures (see Schwartz & Ros, 1995).

In understanding cultural differences in avoided negative affect and responses to suffering, people can learn how to react to negative affect and respond to someone's suffering in a more culturally-sensitive manner. This research could also have implications for grief and trauma counseling, which, in our coalescing world, is often organized and provided internationally. While for some people, it might be helpful to

"pass the night in tears, as long as [they] want to cry" as described by Goethe, others might find it more helpful to tell their "sad heart [to] cease repining [because] behind the clouds is the sun still shining" as described by Longfellow.

Table 1. Internal Consistencies for the Actual, Ideal, and Avoided Affect Measures(Study 1)

		European Americans			Germans		
		α			α		
Octant	Items	Actual	Ideal	Avoided	Actual	Ideal	Avoided
HAN	fearful, hostile, nervous	.64	.61	.86	.69	.43	.83
N	lonely, sad, unhappy	.80	.66	.92	.84	.69	.88
LAN	dull, sleepy, sluggish	.66	.60	.76	.78	.43	.76

Note. Actual  $\alpha$  = Cronbach's alpha for the measure of actual affect; Ideal  $\alpha$  = Cronbach's alpha for the measure of ideal affect; Avoided  $\alpha$  = Cronbach's alpha for the measure of avoided affect; HAN = high-arousal negative; N = negative; LAN = low-arousal negative.

Table 2. Correlations between the mean-deviated aggregates for actual, ideal, andavoided negative affect for European Americans above the diagonal, and forGermans below the diagonal (Study 1)

	Avoid-	Avoid-	Avoid-	Actual	Actual	Actual	Ideal	Ideal N	Ideal
	ed	ed N	ed LAN	HAN	Ν	LAN	HAN		LAN
	HAN								
Avoid-	-	.64***	.19*	09	06	.10	30**	03	11
ed									
HAN									
Avoid-	.39***	-	.26**	04	03	.16	24**	35***	17
ed N									
Avoid-	.12	.03	-	.01	17	.04	.07	06	14
ed LAN									
Actual	.23*	02	.09	-	.58***	.05	.09	.07	.10
HAN									
Actual	17	.07	04	.10	-	.28**	.11	.17	.11
Ν									
Actual	.11	.18	.23*	.01	.22*	-	.14	.15	.19*
LAN									
Ideal	06	.02	.01	.08	12	04	-	.43***	.37***
HAN									
Ideal N	.00	12	.11	.13	.03	.06	.42***	-	.38***
Ideal	.04	.12	32**	05	07	.17	02	.04	-
LAN									

\* p < .05; \*\* p < .01; \*\*\* p < .001.

Table 3. Descriptions of the more elaborate coding system for the sympathy cards:description of the coding variables, their categories, examples for the codes as wellas inter-rater reliability (Study 2)

	Coding Variable	Categories	Examples for the code	Inter-rater
				reliability
				(kappa)
	Acknowledging	0 = grief not	Coded as 1:	.75
Text	grief	acknowledged	in deep sadness,	
		1 = grief	sharing your sorrow,	
		acknowledged	we mourn the loss	
	Encouragement	0 = no	Coded as 1:	.74
		encouragement	may you find comfort,	
		1 = encouragement	the memories are	
			yours, hold on to hope	
Image	Dying image	1 = explicitly dying	1: shriveled leaves,	.69
		2 = vegetation that	flower	
		is not dying	2: living leaves,	
		3 = other image	flower	
			3: rocks, water	

Table 4. Pearson correlations between the manually coded and LIWC-coded text variables for European American sympathy cards above the diagonal, and for German sympathy cards below the diagonal (Study 2)

			Manually	y coded	LIWC coded		
			variables		variables		
			Acknowledging grief	Encouragement	Sadness & death	Positive feelings & optimism	
Manually coded variables	ibles	Acknowledging grief	-	08	.34***	19**	
	varia	Encouragement	06	-	.10	.07	
LIWC coded variables	ibles	Sadness & death	.86***	05	-	07	
	varie	Positive feelings & optimism	09	.28***	08	-	

\* p < .05; \*\* p < .01; \*\*\* p < .001.

Figure 1. Hypothezised model for confirmatory factor analyses. Latent variables (in ovals), their indicators (in rectangles), covariances (along the curved arrows) and error terms (e1 through g9) specified for a confirmatory factor analysis of the negative states each for the ideal, actual, and avoided affect (Study 1)


Figure 2. Actual, ideal, and avoided affect (mean-deviated ratings). HAN = higharousal negative; N = negative; LAN = low-arousal negative (Study 1)



Figure 3. Group differences in avoided and actual negative affect (HAN = higharousal negative; N = negative; LAN = low-arousal negative), controlling for actual and avoided affect, respectively (Study 1)



\* *p* < .05; \*\* *p* < .01; \*\*\* *p* < .001.

Figure 4. Mean percentage of occurrence of negative words related to sadness and death and positive words related to positive feelings and optimism in American and German sympathy and baby cards (Study 2)







Figure 6. Group differences in the comfort ratings of the negative and positive cards (Study 3)



Figure 7. Mediational model (Study 3)





Figure 8. Group and condition differences in avoided negative affect (Study 4a)

Figure 9. Ratings of the negative cards in the three experimental conditions (Study 4b, German sample)



Figure 10. Condition differences in avoided negative affect (Study 5a, American sample)



Figure 11. Card choices in the two experimental conditions (Study 5b, American sample)



# Appendix A

# First pair:





## Second pair:

#### Outside:

#### Inside: (blank)





#### Outside:

#### Inside: (blank)





## Third pair:



Outside:

Inside:



### Appendix B

### **Detailed Description of Experimental Procedure of Study 4a**

When participants arrived at the lab, they were greeted by the experimenter (a European American female student for the American participants and a German female student for the German participants), seated in front of a computer that had a joystick attached to it, and then asked to complete the consent form as well as two questions on a separate sheet of paper asking them how negatively and how positively they currently felt. Participants made their rating for each question on a 5-point scale ranging from 1 ("not at all negative/positive") to 5 ("very negative/positive"). After that, the experimenter read the following instructions to the participants that were also presented on the computer screen:

"Welcome to this reaction time task!

On the computer screen, we will show you different images one by one. Whenever you see a NEGATIVE image, your task is to move the joystick as quickly as possible.

You will either

- PULL the joystick TOWARD YOURSELF,

- PUSH the joystick AWAY FROM YOURSELF or

- MOVE the joystick RIGHT AND LEFT.

PULLING the joystick toward yourself will make the image BIGGER. PUSHING the joystick away from yourself will make the image SMALLER. MOVING the joystick right and left will make the image stay the SAME SIZE."

While the experimenter read the last three sentences, she made the pulling, pushing, and moving to the left and right movements with the joystick for the participant to see. Then she continued to read:

"Please respond to each image as quickly as possible. Now the experimenter will demonstrate this task for you."

Then a negative image appeared on the screen and the experimenter pulled the image towards herself and said "PULLING the joystick toward yourself will make the image BIGGER. Then another negative image appeared on the screen and the

experimenter pushed the image away from herself while saying "PUSHING the joystick away from yourself will make the image SMALLER." Finally, a third negative image appeared on the screen and the experimenter moved the joystick left and right while saying "MOVING the joystick left and right will make the image stay THE SAME SIZE". The three images were IAPS images 2095, 2800, and 2205.

Then, depending on the condition the participant was assigned to, the experimenter said the following:

In the approach negative affect condition, the experimenter said: "Whenever you see a negative image, please PULL the joystick TOWARD yourself to make the image BIGGER."

In the avoid negative affect condition, the experimenter said: "Whenever you see a negative image, please push the joystick AWAY from yourself to make the image SMALLER."

In the control condition, the experimenter said: "Whenever you see a negative image, please move the joystick LEFT AND RIGHT to make the image STAY THE SAME SIZE."

In all three conditions, the experimenter did not make any movements with the joystick so that all participants saw exactly the same images in exactly the same sizes and all participants saw exactly all three movements. For all three conditions, the experimenter added "Whenever you see an image that is not negative, just do nothing. Please move the joystick as quickly as possible."

Then, an error message showed up:

"Error 5472389

Server space allocation exceeded"

The experimenter acted surprised and said "Oh, I guess we don't have enough space on the server to record your reaction times. We ran quite some participants already. Let me fix that. I can access the server from the other computer here. While I try to fix the problem, please prepare yourself for the task by thinking about what you need to do when you see a negative image. So remember, whenever you see a negative image, [the experimenter repeated the condition instruction here]." Then the experimenter sat down on a different computer in the lab, opened up a program with which one can access the server and pretended to make some room on the server by deleting some files. After one minute, the experimenter told the participant "This takes longer than I thought. Let me fix this while you continue with the second part of the experiment." The experimenter then opened a Qualtrics online survey on the computer, which contained the momentary version of the AVI.

#### Appendix C

# Do Americans and Germans Differ in Their Rating of The Sympathy Cards They Would Like to Receive And Does Avoided Negative Affect Mediate These Cultural Differences?

### Hypotheses

We predicted that (1) European Americans would find sympathy cards that focused on the negative less comforting and helpful for themselves compared to Germans, and (2) cultural differences in avoided negative affect would mediate the cultural differences in the types of sympathy cards people think are comforting and helpful to receive.

### Procedure

These data were collected as part of Study 3. In addition to the measures we administered in the first part of the survey, we administered additional measures in the second part of the survey. On average, participants completed the two measures 9.23 days (SE = .36) apart. European Americans and Germans did not differ in the length of this time interval, F(1, 177) = 2.79, *ns*. Attrition was very low (5.79% of participants did not differ in the interval in the survey; European Americans and Germans did not differ in the interval in the survey of the survey; European Americans and Germans did not differ in the interval in the interval of the survey; European Americans and Germans did not differ in the interval in the interval of the survey; European Americans and Germans did not differ in the interval in the interval of the survey; European Americans and Germans did not differ in the interval in the interval in the interval interval

## **Instruments administered in Part 2**

**Avoided Affect.** In addition to the frequency measure of avoided affect in Part 1 of the study, we also wanted to assess the intensity with which participants want to avoid feeling emotional states over the course of a typical week. Thus, participants completed the intensity version for avoided affect of the AVI. In this version, participants are rating <u>how much</u> they want to avoid feeling each emotion over the course of a typical week using a 5-point scale ranging from 1 ("not at all") to 5 ("extremely"). As for the frequency measure of avoided negative affect, we computed mean aggregate scores for the negative items (sad, unhappy, lonely, fearful, hostile, nervous, dull, sleepy, sluggish). Internal consistencies (Cronbach's alphas) were .91 for Americans and .87 for Germans. In line with our previous findings, compared to Germans, we found that Americans had a higher overall mean response to all avoided affect items (American mean = 2.88, SE =

.04; German mean = 2.72, SE = .04; F(1, 177) = 6.95, p < .01, partial eta squared = .04). Thus, as for the frequency avoided negative affect aggregate for the reasons mentioned in Study 1, we subtracted each individual's overall mean response to all the avoided affect items from the raw score for the mean aggregate score of avoided negative affect.

Because participants completed this intensity version of the avoided affect measure approximately 9 days after participants completed the frequency version of the AVI, and because there might be some variation in how much people want to avoid feeling negative over this timeframe (we found a moderate correlation between the two measures of avoided negative affect: r(178) = .63, p < .001), we computed the mean of the frequency and intensity rating of avoided negative affect and used that as predictor for the outcome variables we assessed in the second part of the survey. Internal consistencies for this mean (Cronbach's alphas) were .95 for Americans and .92 for Germans.

Rating of Sympathy Cards Participants Would Like to Receive. To assess how people would like other people to respond to their own suffering, we presented participants with two pairs of different sympathy card texts. Participants rated each text in the pairs successively. For each pair, the text on these cards was matched in length so that the cards mainly differed in their positive and negative content. The two pairs of card texts are depicted below:

#### First pair:

Card 1:

Never again can we ask this person for advice, Never again can we laugh with this person. This person will be missed forever. And we realize that we have lost our dearest.

Card 2:

The people we love remain a part of us. Our loved ones never leave our hearts. Their laughter is ours to keep forever. We will always remember. We will always love. Second pair: Card 1: Thinking of the good times spent together will bring peace and comfort.

Card 2: Sadness is a river in which one cannot swim against the current.

We created four different versions in which we counterbalanced the order of the texts within each pair as well as the order of the pairs. Because order did not influence our findings, we will not discuss it further.

Participants read the following instruction: "Please imagine that one of your loved ones just died. Please write down the relationship the person has to you that you imagined dying (e.g., father, mother, brother, sister, husband, wife, etc.). [Participants then wrote this down] Imagine that you just received a sympathy card from one of your acquaintances. Inside the sympathy card is the following text:" Then participants saw one pair of sympathy card texts containing one positive and one negative text. Participants were asked "How comforting is this card for you?" and then "How helpful is this card to you?". Participants made their ratings on a 5-point scale ranging from 1 ("not at all") to 5 ("extremely") right after they saw each card. Right after participants rated two cards, participants were asked, "Which sympathy card would you rather receive?"

We calculated the average rating of the two negative cards and the average rating of the two positive cards. Internal consistencies (Cronbach's alphas) found for these aggregate scores for the two negative and two positive cards were .70 and .81 for Americans and .60 and .86 for Germans, respectively.

### Analyses and Results

Before testing our hypotheses, we wanted to examine whether we would find the same cultural differences in avoided negative affect when using the intensity measure. We conducted a univariate ANCOVA by Group (Americans, Germans) for avoided negative affect (intensity measure), controlling for actual negative affect (frequency

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measure as we did not assess actual affect with the intensity measure). Consistent with our previous findings, when using the intensity measure, Americans wanted to avoid feeling negative more than did Germans (Americans: Mean = 1.32, SE = .04; Germans: Mean = 1.20, SE = .04; F [1, 175] = 4.16, p < .05, partial eta squared = .02).

# Do Americans and Germans Differ in Their Rating and Choice of The Sympathy Cards They Would Like to Receive?

As described above, we used the mean of the frequency and intensity rating of avoided negative affect and used that in the analyses reported below. We used the frequency measure of actual negative affect from the first part of the survey as we did not assess actual affect with the intensity measure. We controlled for age in the analyses below when it was a significant covariate, otherwise we removed it from the model.

To test our hypothesis, we conducted a 2 x 2 (Group: European Americans, Germans X Valence: negative, positive) repeated measures ANOVA. There was a significant main effect of Valence (F [1, 177] = 247.00, p < .001, partial eta squared = .58), but this was qualified by a significant Group X Valence interaction (F [1, 177] = 4.86, p < .05, partial eta squared = .03). As predicted, simple effects analyses revealed that Americans felt that the negative cards are <u>less</u> comforting and helpful to them than Germans did (Americans: Mean = 1.49, SE = .06; Germans: Mean = 1.78, SE = .07; F [1, 177] = 9.83, p < .01, partial eta squared = .05). However, Americans and Germans did not differ in their rating of the positive cards (Americans: Mean = 2.87, SE = .10; Germans: Mean = 2.81, SE = .10; F [1, 177] = .15, ns), as illustrated in the following Figure:



We also examined whether there were cultural differences in the percentage of participants who chose at least one (out of two) negative cards. Among Americans, only 16.48% chose at least one negative, whereas among the Germans, 37.50% chose at least one negative card,  $\chi 2(1, 179) = 10.07$ , p < .01.

## Does Avoided Negative Affect Mediate the Cultural Differences in Which Cards People Would Like to Receive?

To examine whether avoided negative affect mediated the relationship between culture and rating of the negative sympathy cards participants would like to receive, we conducted the same series of regression analyses as outlined for the mediation analysis regarding the cards people would like to send. In the analyses reported below, we controlled for age as it was significantly related to the outcome variable (the older participants were, the more comforting and helpful they regarded the negative cards, r(177) = .17, p < .05; age was not significantly related to the rating of the negative cards people would like to send, r(182) = .08, *ns*, which is why we did not include it in the analyses reported above).

In Step 1, we regressed the mean rating of the negative cards, controlling for the mean rating of the positive cards, onto Group (Americans = 0, Germans = 1) (path c). As already described by the ANOVA above, Germans felt that the negative cards are more

comforting and helpful than did Americans,  $B_c = .29$ , SE = .09, t(176) = 3.20, p < .01, Cohen's  $f^2 = .07$ . In Step 2, we regressed avoided negative affect on Group, controlling for actual negative affect (path a). In line with our other results, using the mean of the intensity and frequency measure of avoided negative affect, Americans wanted to avoid feeling negative more than did Germans,  $B_a = ..12$ , SE = .06, t(175) = .2.04, p < .05, Cohen's  $f^2 = .04$ . In the third step, we regressed the mean rating of the negative cards onto avoided negative affect (path b) and group (path c'). We also entered actual negative affect and the mean rating of the positive cards as control variables. Above and beyond group differences, the more people wanted to avoid negative affect, the less helpful they considered the negative cards,  $B_b = ..23$ , SE = .12, t(173) = .2.04, p < .05. Furthermore, after entering avoided negative affect in the model (path c'), the effect of Group on the rating of the negative cards was reduced,  $B_{c'} = .26$ , SE = .09, t(173) = 2.81, p < .01, difference in coefficients test by Freedman and Schatzkin (MacKinnon et al., 2002):  $t_{Bc}$ .  $B_{c'}(177) = 2.56$ , p < .05, indicating that avoided negative affect partly mediates the cultural differences in the rating of the negative cards, as predicted.

We also tested the indirect effect of group on rating of the negative cards through avoided negative affect, using Preacher and Hayes' (2008) bootstrapping macro with 5,000 resamples. This indirect effect was estimated to lie between .005 and .107 with 95% confidence interval. Because this 95% confidence interval does not include zero, the indirect effect is significantly different from zero at p < .05. In line with the difference in coefficients test reported above, this suggests that avoided negative affect can partly explain American-German differences in the rating of the negative cards.

We also performed a multiple regression analysis on the mean rating of the positive cards, entering avoided negative affect, actual negative affect, and the mean rating of the negative cards in one step. Avoided negative affect was not significantly related to the comfortable rating of the positive cards, B = .16, t(174) = .95, ns.

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