

# The Different Behavioral Intentions of Collectivists and Individualists in Response to Social Exclusion

Personality and Social  
Psychology Bulletin  
2015, Vol. 41(3) 363–378  
© 2015 by the Society for Personality  
and Social Psychology, Inc  
Reprints and permissions:  
sagepub.com/journalsPermissions.nav  
DOI: 10.1177/0146167214566186  
pspb.sagepub.com



Michaela Pfundmair<sup>1</sup>, Verena Graupmann<sup>2</sup>, Dieter Frey<sup>1</sup>,  
and Nilüfer Aydin<sup>3</sup>

## Abstract

We investigated how participants with collectivistic and individualistic orientation cope with social exclusion on a behavioral level. In Studies 1 and 2, we found participants with more individualistic orientation to indicate more antisocial behavioral intentions in response to exclusion than in response to inclusion; however, participants with more collectivistic orientation did not differ in their behavioral intentions between exclusion and inclusion. In the third and fourth study, we replicated our findings across cultures: German and U.S. participants indicated more antisocial and avoiding behavioral intentions under exclusion than under inclusion, whereas Turkish and Indian participants did not differ in their behavioral intentions between exclusion and inclusion. In Studies 3 and 4, only German and U.S. participants were significantly affected by exclusion, showing more negative mood, which correlated with their behavioral intentions. In Study 4, the different behavioral intentions of collectivists and individualists were mediated by a different threat experience. The findings emphasize the role of self-construal and culture, as well as the self-threat inherent in exclusion.

## Keywords

social exclusion, behavioral intentions, individualism, collectivism

Received September 12, 2013; revision accepted December 3, 2014

Imagine yourself walking through a park in your neighborhood. Around one of the benches, you see a group of people you know from a professional course; you hear them laughing and talking about a social event. You decide to stop and greet them. As you arrive at the group, they stop talking; the conversation fades into an awkward silence. You realize that these people did not want to invite you to the event they were talking about. You are feeling excluded. How will you react in this situation? Angrily, shocked, or friendly?

Research shows that a person's reaction to social exclusion may depend on their cultural self-construal: People with a more interdependent self-construal are less affected by negative psychological consequences of social exclusion than people with a more independent self-construal (Gardner, Jefferis, & Knowles, in press; Ren, Wesselmann, & Williams, 2013). Therefore, there is reason to expect differences in how people *experience* social exclusion. Does this also hold true for behavioral intentions? The present article investigates how people with different self-construal respond to incidents of social exclusion on the level of behavioral intentions.

## Immediate and Downstream Reactions to Social Exclusion

The need to belong is a fundamental motivation of human nature that has been compared with hunger or thirst (Baumeister & Leary, 1995). A threat to this need can have tremendously painful and stressful outcomes for the individual. The psychological consequence is a decrease in the feelings of belonging, self-esteem, control, and meaningful existence (Williams, Cheung, & Choi, 2000; Zadro, Williams, & Richardson, 2004). In the above example, the immediate reaction is characterized by an initial feeling of being rejected. This first reaction is associated with a physiological

<sup>1</sup>Ludwig-Maximilians University of Munich, Germany

<sup>2</sup>DePaul University Chicago, IL, USA

<sup>3</sup>Alpen-Adria University of Klagenfurt, Austria

### Corresponding Author:

Michaela Pfundmair, Ludwig-Maximilians University of Munich, Leopoldstr. 13, 80802 Munich, Germany.

Email: michaela.pfundmair@psy.lmu.de

alarm system being mobilized in the body: Blood pressure increases (Zadro, 2004), and the anterior cingulate cortex—the neuronal alarm system that is associated with physical pain—is activated (Eisenberger, Lieberman, & Williams, 2003). The urgency of this initial reaction to social exclusion indicates the existence of a pre-cognitive warning system (Zadro et al., 2004). Williams (2007) refers to these reactions as reflexive reactions.

In a second step, excluded people try to cope with the situation (Williams, 2007). This can happen in a variety of ways: Some excluded individuals show highly prosocial behavior and recognize facial expressions better (Pickett, Gardner, & Knowles, 2004) or try to connect with new sources of affiliation (Maner, DeWall, Baumeister, & Schaller, 2007). Others react highly antisocially, for example, by allocating higher amounts of hot sauce to strangers (Warburton, Williams, & Cairns, 2006) or by punishing others with higher levels of aversive noise (Twenge, Baumeister, Tice, & Stucke, 2001). Williams (2007) refers to these as reflective reactions.

Whether people use anti- or prosocial coping strategies to deal with social exclusion is specified in various theoretical models. Williams (2007) and Williams, Case, Warburton, and Richardson (in press) suggest that the behavioral intention depends on which need is threatened: Threats to belonging and self-esteem may motivate people to please others; threats to control and meaningful existence might motivate aggressive responses. A different approach is suggested by Richman and Leary (2009). They theorize that the behavioral reaction after social exclusion depends on the relationship's characteristics, that is, investment in or length of relationship. On the basis of the finding that high-severity exclusionary experiences lead to a decrease in pain sensitivity and numbing, while low-severity experiences are associated with higher pain sensitivity, Bernstein and Claypool (2012) speculated that the pain of minor social injuries might direct people to engage in corrective prosocial behaviors; the numbing of severe social injuries, however, might lead to more antisocial behaviors.

The above models suggest that the behavioral reaction to social exclusion is moderated by situational influences; however, also dispositional factors have been pointed out: Rejection sensitivity (Ayduk, Downey, Testa, Yen, & Shoda, 1999; Downey, Frietas, Michaelis, & Khouri, 1998), agreeableness (Buckley, Winkel, & Leary, 2004), gender (Williams & Sommer, 1997), or loneliness (Gardner, Pickett, & Knowles, 2005) have been shown to affect reactions to exclusion. With both dispositional and situational factors influencing behavioral responses to social exclusion, cultural background and self-construal might also play a role here.

### **Culture and the Self**

To understand the nature and direction of the behavioral reaction following social exclusion, it is important to take into account the function of our sensitivity to being excluded.

The slightest hint of social exclusion activates a distinct alarm and regulation system (Zadro et al., 2004) that is theorized to have evolved as protection from being expelled from the social structure that ensures the individual's survival (Gruter & Masters, 1986). Therefore, one might argue that the exclusion alarm system has developed as a cultural universal. However, as different individuals live in different environments, they might also have developed different alarm and regulation systems. Our thoughts and behaviors are strongly dependent on our cultural context (Heine, 2008).

Individualistic cultures, which base their social norms on an independent idea of the self, are mainly located in North America or Western Europe, while collectivistic cultures with an interdependent self-construal are primarily in Asia, Africa, or South America (Hofstede, 2001). What Markus and Kitayama (1991) call the independent self is a self that is construed through attributes of the individual: Independents focus on individual uniqueness, personal autonomy, and independence. On the other side of the spectrum is a self that is construed through fundamental connections to others, the interdependent self (Markus & Kitayama, 1991). People with interdependent self-construal set their priorities on group harmony, interpersonal relations, and interdependence. The differences in self-construal are not just theoretical but are even observed in functional magnetic resonance imaging studies: People with collectivistic orientation show activation for self- and close-other-related content in the same brain regions; people with individualistic orientation, however, show activation in separate regions of the brain when faced with the same task (Zhu, Zhang, Fan, & Han, 2007).

Nearly every aspect of life is influenced by self-construal; it affects emotion, cognition, and motivation (Heine, 2008; Markus & Kitayama, 1991). How does it influence the experience of and reaction to social exclusion? Research that shows reactions to social exclusion ranging from highly prosocial behavior (e.g., Lakin & Chartrand, 2003) to highly antisocial, aggressive behavior (e.g., Warburton et al., 2006) has mostly been carried out in Western cultures and has hardly examined differences in self-construal. To our knowledge, there is no research investigating behavioral intentions in response to social exclusion in Eastern cultures or with collectivistic individuals, respectively. Recent research on intercultural differences in immediate psychological reactions to social exclusion suggests that people with a more collectivistic orientation should differ from people with a more individualistic orientation also in their behavioral intentions.

### **Social Exclusion and the Individualistic/Collectivistic Orientation**

Compared with people with individualistic orientation, people with collectivistic orientation show less immediate psychological reactions to social exclusion: Previous research has found that collectivistically oriented U.S. participants report less negative mood, higher self-esteem, and less

aggressive behavioral intentions in response to social exclusion compared with individualistically oriented U.S. participants (Gardner et al., in press). In addition, participants from collectivistic cultures were shown to be less affected in their immediate basic need fulfillment and heart rate activity after exclusion compared with participants from individualistic cultures (Pfundmair et al., 2014). Knowles and Gardner (2008) revealed that an activation of social bonds (as underlying among collectivists) leads to decreased distress in response to social exclusion. Way and Lieberman (2010), moreover, suggested that collectivists in particular benefit from being part of an interdependent social network: They might be protected against singular social losses (however, at the same time be unprotected against absolute disconnections from social support, as findings of correlations between collectivism and rejection sensitivity indicate; Yamaguchi, 1994; Yamaguchi, Kuhlman, & Sugimori, 1995).

The findings of differences in immediate reactions to social exclusion, which suggest that collectivists are less susceptible to common social exclusion manipulations, can be interpreted in various ways: On the one hand, individuals with collectivistic orientation might have better capabilities to buffer social exclusion by activating their social representations (Gardner et al., in press). An alternative explanation is that collectivists might not show psychological reactions to social exclusion to the same extent as individualists because exclusion might not be perceived as threatening to the interdependent self-construal to the same extent as to the independent self. This might be the case as exclusion of the individual might not necessarily affect the structure of the collectivistic self that is defined through association with others rather than through the individual social standing (Markus & Kitayama, 1991).

To sum up, recent research has investigated immediate consequences of social exclusion (i.e., the reflexive stage) in collectivistically and individualistically oriented people. However, no study has yet examined how and why people with collectivistic and individualistic orientation respond to social exclusion on the secondary behavioral level (i.e., the reflective stage). The current state of the literature allows for two different predictions: (a) If people with collectivistic orientation experience social exclusion as a threat but have better capacities to buffer it by activating their social representations, they might perceive social exclusion as minor social injury and therefore show more positive behavioral intentions than people with individualistic orientation who, not being able to buffer, might experience a major social injury and thus show more negative intentions. (b) If, however, more collectivistic individuals do *not* experience social exclusion as a threat to the self, they might not differ in their behavioral intentions between exclusion and inclusion, resulting in a seemingly muted reaction.

The present studies, therefore, investigate how behavioral intentions in response to incidents of social exclusion are moderated by differences in the individual and cultural self-construal.

## Overview of the Present Research

In four studies, we examined how an individualistic or collectivistic orientation moderates behavioral coping with social exclusion. In Studies 3 and 4, we additionally looked at the role of emotions in this context. In Study 4, we tested the underlying psychological process and contrasted the effect against control conditions.

In Studies 1 and 4, participants were asked to recall an incident of social exclusion from their own life and write an essay about it; in Study 2, social exclusion was manipulated through the virtual ball-tossing game Cyberball; Study 3 manipulated social exclusion by scenario descriptions. Investigating differences in individualism/collectivism, we measured individual differences along the Self-Construal Scale (Singelis, Triandis, Bhawuk, & Gelfand, 1995) in an Austrian (Study 1) and a German sample (Study 2). In Studies 3 and 4, we operationalized self-construal by comparing different cultures, namely, Turkey (Study 3) and India (Study 4) as collectivistic cultures, and Germany (Study 3) and the United States (Study 4) as individualistic cultures. Behavioral intentions were investigated as follows: In Studies 1 and 2, we asked participants to describe what they had done (Study 1) or what they would like to do (Study 2) after the exclusion experience; these qualitative data were evaluated by two independent coders. In Studies 3 and 4, participants were asked to rate several actions to engage in after experiencing social exclusion.

## Study 1

Study 1 served as a first test of how different orientations in terms of individualism and collectivism affect behavioral intentions after an instance of social exclusion. Social exclusion was manipulated by visualizing a past experience of exclusion or inclusion. Differences in orientation were measured by Singelis et al.'s (1995) scale within an Austrian sample. Assessing participants' reactions following the exclusionary experience, participants engaged in an association task: They were asked to specify what they had done after the past experience of exclusion via a thought protocol. If differences in collectivism and individualism are associated with milder or stronger experience of social exclusion due to more or less successful buffering, thought listings should accordingly vary between positive and negative tendencies. However, if a more collectivistic orientation is not related to better buffering of exclusion, but rather to not being threatened by the manipulation, the collectivists' thought listings should show no differences between inclusion and exclusion.

## Method

**Participants.** Forty-seven people (38 women, 9 men; ages 16-50 years;  $M = 21.64$ ,  $SD = 5.48$ ) were recruited for

participation in this study near and on the campus of a large Austrian University.

**Design and procedure.** The experiment examined behavioral intentions in response to social exclusion versus inclusion (*exclusionary status*: exclusion vs. inclusion). Individualistic and collectivistic orientation was measured as a moderator variable. Participants were recruited to participate in a paper-and-pencil study on visualization of past experiences in their lives. After filling out the orientation measure, participants were randomly assigned to one of two essay conditions, exclusion or inclusion, to manipulate exclusionary status. In each condition, participants were asked to remember vividly and write about a previous experience from their life. Visualizing a former instance of social exclusion has shown to evoke comparable responses to those using interpersonal methods for creating exclusion (Maner et al., 2007; Pickett et al., 2004). After this, participants were asked to complete the second part of the questionnaire. Finally, they were debriefed and thanked for their participation.

### Materials

**Individualistic/collectivistic orientation.** Participants responded to 32 statements from the horizontal and vertical individualism and collectivism scale (Singelis et al., 1995) on scales from 1 (*not at all*) to 9 (*very much*). We cumulated the items of the horizontal and vertical individualism subscale ( $\alpha = .76$ ) and the items of the horizontal and vertical collectivism subscale ( $\alpha = .60$ ), and calculated the difference score (collectivism was deducted from individualism;  $\alpha = .63$ ).

**Exclusionary status.** Participants in the exclusion condition were asked to write an essay about a time they were excluded from one or more close others. In contrast, participants in the inclusion condition were asked to write about a time they were included and accepted by one or more close others.

**Manipulation check.** Assessing the effectiveness of the exclusionary status manipulation, participants answered two items (“To what extent did you feel excluded at that time?” and “To what extent were you ignored by the other people?”),  $r(47) = .80, p < .001$ , on scales from 1 (*not at all*) to 9 (*very much*).

**Behavioral intentions.** Participants were asked to list what they had done after the experience they had written about. The answers were transcribed and given to two coders who were not aware of the study’s goal; their task was to rate the participants’ answers with regard to valence and number of reactions. Interrater reliabilities were acceptable for both valence,  $r_s > .31, p_s < .034$ , and number of reactions,  $r_s > .36, p_s < .013$ . For valence, the coders rated on scales from 1 (*not at all*) to 5 (*very much*) to what extent the thought protocols involved positive social engagement (prosocial behavioral intentions: for example, “I have talked to good

friends after this situation”;  $M = 3.18, SD = 1.59$ ), to what extent they involved negative social engagement (antisocial behavioral intentions: for example, “I would have preferred to free my mind, vent my anger, and not accept that—confrontation!”;  $M = 1.52, SD = 0.88$ ), and to what extent they involved non-social engagement (avoiding behavioral intentions: for example, “I have shut myself away, did not talk about it, and was sad”;  $M = 2.24, SD = 1.47$ ). For number of reactions, the coders counted how often each of the three reaction categories occurred within the participants’ answers (prosocial behavioral intentions:  $M = 0.85, SD = 0.81$ ; antisocial behavioral intentions:  $M = 0.12, SD = 0.27$ ; avoiding behavioral intentions:  $M = 0.48, SD = 0.61$ ). To create a weighted average of responses, we calculated an index by multiplying valence with number of reactions for each of the three reaction categories.

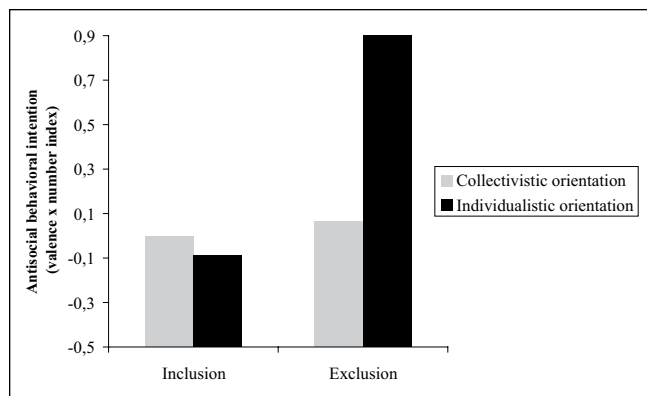
### Results

**Manipulation check.** Exclusionary status was perceived as expected: Participants in the exclusion condition reported that they had felt significantly more excluded and ignored ( $M = 6.57, SD = 2.01$ ) than participants in the inclusion condition ( $M = 3.02, SD = 2.53$ ),  $t(45) = 5.23, p < .001, d = 1.54$ , 95% confidence interval (CI) = [0.87, 2.19].

**Role of individualistic/collectivistic orientation.** To test the moderating effect of self-construal on behavioral intentions following social exclusion versus inclusion, we conducted moderated regression analyses on each of the reaction categories. We entered the independent variables orientation (centered by standardization), exclusionary status (dummy coded as 1 for exclusion and  $-1$  for inclusion), and the interaction term.

Prosocial reaction as dependent variable revealed a significant interaction,  $b = -1.13, SE = .54, t(46) = -2.10, p = .042, 95\% CI = [-2.21, -0.04]$ . Post hoc simple slope analyses, however, did not reveal significant differentiations.

The regression analysis on the antisocial reaction revealed a significant main effect of exclusionary status,  $b = 0.43, SE = .11, t(46) = 3.75, p = .001, 95\% CI = [0.20, 0.65]$ , and of orientation,  $b = 0.35, SE = .12, t(46) = 3.02, p = .004, 95\% CI = [0.12, 0.58]$ , with excluded and individualistically oriented participants demonstrating more antisocial behavioral intentions than included and collectivistically oriented participants. The analysis also showed a significant interaction,  $b = 0.39, SE = .12, t(46) = 3.31, p = .002, 95\% CI = [0.15, 0.63]$ . Further simple slope analyses revealed that participants with a more collectivistic orientation did not differ in their antisocial reaction between exclusion and inclusion,  $b = 0.03, SE = .16, t(46) = 0.21, p = .834, 95\% CI = [-0.29, 0.36]$ . Participants with a more individualistic orientation, however, showed a more pronounced antisocial reaction after social exclusion than after inclusion,  $b = 0.81, SE = .16, t(46) = 5.00, p < .001, 95\% CI = [0.48, 1.14]$ . Collectivistically



**Figure 1.** Behavioral intention predicted by individualistic/collectivistic orientation (Study 1).

and individualistically oriented participants, moreover, did not differ in the inclusion condition,  $b = 0.00$ ,  $SE = .14$ ,  $t(46) = 0.00$ ,  $p = 1.00$ , 95% CI = [-0.29, 0.29], but did differ in the exclusion condition,  $b = 0.78$ ,  $SE = .19$ ,  $t(46) = 4.18$ ,  $p < .001$ , 95% CI = [0.40, 1.15]; see Figure 1.

The regression analyses on avoiding reactions did not show significant effects.

## Discussion

In Study 1, people with a more individualistic orientation reacted strongly to an exclusionary experience: They showed specific behavioral intentions after being excluded and, thereby, indicated more antisocial behavioral responses following exclusion compared with inclusion. Participants with a more collectivistic orientation, however, were not affected in their behavioral intentions by an exclusionary event: After being included, they showed the same intentions as individualistic participants; however, after being excluded, their reaction did not differ from their reaction following inclusion—contrary to participants with a more individualistic orientation. The behavioral intentions of individualistic individuals can be interpreted in terms of the different coping theories: Negative behavioral tendencies might reflect a major social injury (Bernstein & Claypool, 2012), an exclusionary experience perceived as unfair or possible alternative relationships (Richman & Leary, 2009), or threats to control and meaningful existence (Williams et al., in press). However, the seemingly muted reaction of collectivistic individuals may reflect something else: People with collectivistic orientation might not be threatened by exclusion in the first place, resulting in no emotional-motivational state leading to a distinct behavioral tendency in the given context. This interpretation would be in accordance with the finding that people with a collectivistic self-construal are not affected by social exclusion manipulations in terms of an immediate appraisal (Pfundmair et al., 2014). Accordingly, there might be no reason for them to adapt subsequent behavior.

To investigate our assumptions in a more straightforward manner, we designed the second study with a more direct manipulation of social exclusion, that is, via Cyberball, in which participants are involved more personally and in real-time; also, behavioral intentions were assessed more directly by asking participants for their plans after the experiment.

## Study 2

In Study 1, people with individualistic orientation reacted more negatively to social exclusion, whereas people with collectivistic orientation did not show specific behavioral intentions contingent on exclusion. To further investigate this relationship, we used a more direct manipulation in Study 2. Exclusionary status was manipulated by the virtual ball-tossing game Cyberball. Differences along individualistic and collectivistic orientation were measured in a German sample by the Self-Construal Scale (Singelis et al., 1995). Participants' behavioral intentions in response to the exclusionary experience were assessed with a similar task as in Study 1: Participants were asked to describe what they would like to do after completing the study in a thought protocol. If different orientations lead to experiences of social exclusion as more or less strongly, then thought listings should show negative or positive coping. However, if people with collectivistic orientation are not threatened by social exclusion, then they should not show differential responses.

## Method

**Participants.** Forty-three students (38 women and 5 men) of a large German university participated in this study. They ranged in age from 19 to 44 years ( $M = 25.79$ ,  $SD = 5.93$ ).

**Design and procedure.** The experiment examined behavioral intentions in response to social exclusion versus inclusion (*exclusionary status*: exclusion vs. inclusion); individualistic and collectivistic orientation was measured as a moderator variable. Invited by postings on blackboards, participants were asked to take part in a study on mental visualization. First, participants were asked to answer a paper-and-pencil questionnaire: Participants filled out Singelis et al.'s (1995) horizontal and vertical individualism and collectivism scale. Then, Cyberball (Williams & Jarvis, 2006) was started on a computer screen: Cyberball is a computer simulation designed to allow manipulations of social exclusion and inclusion. Participants were randomly assigned to conditions of either inclusion or exclusion. After playing Cyberball, participants were asked to complete the second part of the paper-and-pencil questionnaire. Then, the experimenter debriefed, thanked, and dismissed the participant.

## Materials

**Individualistic/collectivistic orientation.** Participants responded to 32 statements from the horizontal and vertical individualism

and collectivism scale (Singelis et al., 1995) on scales from 1 (*not at all*) to 9 (*very much*). Again, we cumulated the items of the horizontal and vertical individualism subscale ( $\alpha = .77$ ) and the items of the horizontal and vertical collectivism subscale ( $\alpha = .85$ ), and calculated the difference score (collectivism was deducted from individualism;  $\alpha = .79$ ).

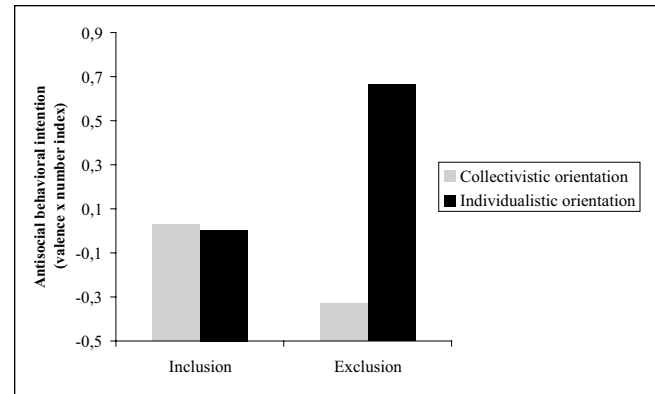
**Exclusionary status.** Manipulating exclusionary status, participants were asked to play Cyberball. They were informed that they were playing with two other participants on a computer network. These other participants were, without the knowledge of the actual participant, simulated by the computer and followed specific default settings. A computerized ball was tossed 40 times between the three playing subjects. In the inclusion condition, participants were thrown the ball roughly one third of the time by the others; in the exclusion condition, participants got the ball twice at the beginning of the game and never again.

**Manipulation check.** The success of Cyberball was assessed by two items (“What percentage of the throws were directed at you?” and “To what extent were you excluded by the other participants during the game?”) to be inserted into a blank box and a scale from 1 (*not at all*) to 9 (*very much*), respectively (Zadro et al., 2004).

**Behavioral intention.** As in Study 1, participants’ behavioral reaction following exclusion and inclusion was recorded within the context of an association task: Participants were asked to answer the following question “What would you like to do after this session?” in a blank text box. Their answers were transcribed and given to two coders who were not aware of the study’s goal; their task was to rate the participants’ answers with regard to valence and number of reactions, as in Study 1. Interrater reliabilities were acceptable for both valence,  $r_s > .64$ ,  $p_s < .001$ , and number of reactions,  $r_s > .35$ ,  $p_s < .023$ . For valence, the coders rated on scales from 1 (*not at all*) to 5 (*very much*) to what extent the participants’ answers involved each of the reaction categories (prosocial behavioral intentions:  $M = 2.77$ ,  $SD = 1.79$ ; antisocial behavioral intentions:  $M = 1.14$ ,  $SD = 0.49$ ; avoiding behavioral intentions:  $M = 2.35$ ,  $SD = 1.39$ ); for number, they counted how often each of the reaction categories occurred within the participants’ answers (prosocial behavioral intentions:  $M = 0.66$ ,  $SD = 0.69$ ; antisocial behavioral intentions:  $M = 0.05$ ,  $SD = 0.18$ ; avoiding behavioral intentions:  $M = 0.52$ ,  $SD = 0.52$ ). To create a weighted average of responses, we again calculated an index by multiplying valence with number of reactions for each of the three reaction categories.

## Results

**Manipulation check.** Exclusionary status was perceived as expected: Participants in the exclusion condition reported that they received significantly fewer throws during Cyberball



**Figure 2.** Behavioral intention predicted by individualistic/collectivistic orientation (Study 2).

( $M = 5.00$ ,  $SD = 2.83$ ) than participants in the inclusion condition ( $M = 34.95$ ,  $SD = 10.16$ ),  $t(41) = -13.03$ ,  $p < .001$ ,  $d = -3.98$ , 95% CI =  $[-5.01, -2.92]$ . Also, participants in the exclusion condition evaluated the extent of being excluded significantly higher ( $M = 7.95$ ,  $SD = 1.77$ ) than participants in the inclusion condition ( $M = 3.14$ ,  $SD = 1.67$ ),  $t(41) = 9.17$ ,  $p < .001$ ,  $d = 2.80$ , 95% CI =  $[1.94, 3.64]$ .

**Role of individualistic/collectivistic orientation.** Testing the moderating effect of individualistic/collectivistic orientation on behavioral intentions after social exclusion versus inclusion, we conducted moderated regression analyses on each of the reaction categories. We entered the independent variables orientation (centered by standardization), exclusionary status (dummy coded as 1 for exclusion and  $-1$  for inclusion), and the interaction term.

Prosocial reaction as a dependent variable revealed no significant effects.

The regression analysis on antisocial reaction showed a significant main effect of orientation,  $b = 0.24$ ,  $SE = .08$ ,  $t(42) = 3.11$ ,  $p = .004$ , 95% CI =  $[0.09, 0.40]$ , with individualistically oriented participants listing significantly more antisocial behavioral tendencies than collectivistic participants. The analysis moreover revealed a significant interaction,  $b = 0.26$ ,  $SE = .08$ ,  $t(42) = 3.33$ ,  $p = .002$ , 95% CI =  $[0.10, 0.41]$ . Further simple slope analyses illustrated that participants with a more collectivistic orientation did not differ in their antisocial reaction between exclusion and inclusion,  $b = -0.18$ ,  $SE = .11$ ,  $t(42) = -1.66$ ,  $p = .104$ , 95% CI =  $[-0.40, 0.04]$ . Participants with a more individualistic orientation, however, listed significantly more antisocial intentions after social exclusion than after inclusion,  $b = 0.33$ ,  $SE = .10$ ,  $t(42) = 3.20$ ,  $p = .003$ , 95% CI =  $[0.12, 0.54]$ . As in Study 1, collectivistically and individualistically oriented participants did not differ in the inclusion condition,  $b = 0.01$ ,  $SE = .12$ ,  $t(42) = 0.09$ ,  $p = .925$ , 95% CI =  $[-0.23, 0.26]$ , but did differ in the exclusion condition,  $b = 0.52$ ,  $SE = .09$ ,  $t(42) = 5.59$ ,  $p < .001$ , 95% CI =  $[0.33, 0.71]$ ; see Figure 2.

The avoiding reaction as a dependent variable showed no significant effects.

### Discussion

As in Study 1, we found that only people with a more individualistic orientation adapted their behavioral intentions to the exclusionary experience: Following social exclusion, they showed proclivity to more antisocial behavior. Individuals with a more collectivistic orientation, however, were not affected in their behavioral intentions by the exclusionary status: After inclusion, they showed the same intentions as individualistic participants. After exclusion, however, their behavioral intentions did not differ from their reaction after inclusion—a reaction significantly different from the individualist's exclusion reaction. Thus, Study 2 replicated the results of Study 1 within a more direct, self-involving, and real-time design. The finding that participants with a more collectivistic orientation did not show distinct behavioral responses to social exclusion points to the assumption that these participants have less motivation to adapt their behavior as they might not experience social exclusion against the individual as a threat to the same degree as individualists do.

However, as behavioral intentions were investigated in an explicit manner, participants could have been prone to socially desirable responding: Individualists, who have the goal to view the self in unique and positive terms, might have shown self-defensive tactics; collectivists, focusing on saving the face and maintaining good relationships with others, might have shown a restrained attitude (Lalwani, Shavitt, & Johnson, 2006). Therefore, in our third study, we additionally asked for a more implicit response to social exclusion, participants' current mood, and looked at its relation with behavioral intentions. Also, in Study 3, we took cultural variations in individualism/collectivism into account, comparing German and Turkish participants.

### Study 3

So far, we have found that people with a more individualistic orientation reacted to social exclusion on the behavioral level—people with a more collectivistic orientation, however, did not seem to be affected in their subsequent behavioral intentions. We hypothesized that the seemingly muted behavioral response in the more collectivistic individuals might have been due to the fact that social exclusion was not perceived as threatening and might therefore not have resulted in negative emotions leading to behavioral intentions. Emotions are immediate reactions to self-relevant information, inducing motivational states that inform the organism about behavioral options (Schwarz, 1990). Events that are irrelevant to the self are less likely to lead to strong emotional responses, as described by Frijda (1986):

Emotions are elicited by significant events. Events are significant when they touch upon one or more of the concerns of the subject.

Emotions thus result from the interaction of an event's actual or anticipated consequences and the subject's concerns. (p. 6)

Study 3, therefore, investigated whether the participants' emotional response to social exclusion was associated with their behavioral intentions. In Study 3, we focused on the cross-cultural individualistic/collectivistic orientation comparing different cultures, namely, Turkey as a collectivistic and Germany as an individualistic culture (Hofstede, Hofstede, & Minkov, 2010, classify Turkey [individualism score = 37] as less individualistic than Germany [individualism score = 67]). Social exclusion was manipulated using a vignette design in which participants were asked to imagine and empathize with an employee who experiences social exclusion versus inclusion by colleagues. After that, participants were asked to evaluate their current emotional state. Participants' behavioral intentions were assessed with items about behavioral reactions in the form of antisocial, avoiding, and prosocial responses. The two following hypotheses were tested:

**Hypothesis 1:** We predicted German participants to show differential behavioral intentions when faced with social exclusion versus inclusion; for Turkish participants, we expected no differences between inclusion and exclusion in their behavioral intentions.

**Hypothesis 2:** We predicted German but not Turkish participants to show more negative emotions faced with exclusion compared with inclusion, and higher levels of negative mood following exclusion to be associated with more intense behavioral intentions in German participants.

### Method

**Participants.** One hundred thirty-nine undergraduate students participated in this study: 71 students from a large German university (55 women and 16 men) and 68 students from a large university in Turkey (55 women and 13 men); they ranged in age from 19 to 63 years ( $M = 24.83$ ,  $SD = 6.02$ ) in the German sample and from 17 to 53 years ( $M = 20.46$ ,  $SD = 4.21$ ) in the Turkish sample.

**Design and procedure.** The experiment examined behavioral intentions in response to social exclusion versus inclusion (*exclusionary status*: exclusion vs. inclusion) in two cultures (*culture*: Germany vs. Turkey). In addition, mood was measured. Participants were recruited to participate in a study on perception and empathy in scenario descriptions; if they agreed, they were given a paper-and-pencil questionnaire. Participants were randomly assigned to one of two scenario conditions, social exclusion or social inclusion, to manipulate exclusionary status. In each condition, participants were asked to read the scenario carefully and try to put themselves into the position of the individual in the story. Studies have shown that scenario descriptions induce reactions comparable to those found using interpersonal methods for creating

exclusion (Fiske & Yamamoto, 2005; Hitlan, Kelly, Shepman, Schneider, & Zaraté, 2006). The scenarios have been validated in previous research (Pfundmair et al., 2014; based on Aydin, Fischer, & Frey, 2010). After reading the scenarios, participants were asked to complete a questionnaire including the manipulation check, mood, and items on behavioral intentions. Finally, they were debriefed and thanked for their participation.

### Materials

**Exclusionary status.** In the exclusion condition, participants read about a workplace situation where an employee was perceived to be strongly excluded by colleagues during an important presentation.

Today you have to present your ideas in a team meeting. This presentation is very important for you; you have been preparing it for months. After giving the speech, both your colleagues and your boss react coldly; except of a few joking comments, no one agrees to your suggestions. You have the feeling that you are not fully accepted as a member of the team and the company. You feel that you are not taken seriously from your boss and your colleagues and you feel left alone. You are feeling completely excluded.

In the inclusion condition, participants read about a workplace situation where an employee was perceived to be accepted by colleagues during a presentation.

Today you have to present your ideas in a team meeting. This presentation is very important for you; you have been preparing it for months. After giving the speech, both your colleagues and your boss react enthusiastic; they add good ideas and agree to your suggestions. You have the feeling that you are fully accepted as a member of the team and the company. You feel that you are taken absolutely seriously from your boss and your colleagues and you do not feel left alone. You are feeling completely accepted.

**Manipulation check.** The manipulation check for exclusionary status was assessed using one item ("To what extent did you feel excluded in the described scenario?") to be answered on a scale from 1 (*not at all*) to 9 (*very much*).

**Mood.** Participants were asked to fill out the 20-item Positive and Negative Affect Schedule (PANAS) about their current mood (Watson, Clark, & Tellegen, 1988) on a scale from 1 (*not at all*) to 5 (*very much*). We aggregated the positive affect items ( $\alpha = .92$ ) and the negative affect items ( $\alpha = .93$ ), and calculated the difference score (negative affect was deducted from positive affect;  $\alpha = .94$ ).

**Behavioral intentions.** Participants' behavioral reactions in response to social exclusion and inclusion were assessed by three items on scales from 1 (*not at all*) to 9 (*very much*) asking for what they would have done after the situation in the

scenario: for the prosocial response, "I would have socialized with other people"; for the antisocial response, "I would have paid them back somehow (the negative behavior)"; and for the avoiding response, "I would have withdrawn from the situation."

The questionnaire was administered in the respective language.

### Results

**Manipulation check.** Participants in the exclusion condition reported that they felt significantly more excluded ( $M = 6.48$ ,  $SD = 2.09$ ) than participants in the inclusion condition ( $M = 3.39$ ,  $SD = 2.62$ ),  $t(137) = -7.69$ ,  $p < .001$ ,  $d = -1.30$ , 95% CI =  $[-1.67, -0.94]$ . Thus, exclusionary status was perceived as expected.

### Cultural differences

**Behavioral reaction.** The 2 (culture)  $\times$  2 (exclusionary status) ANOVA on prosocial reactions only revealed a main effect of culture,  $F(1, 134) = 48.74$ ,  $p < .001$ ,  $\eta_p^2 = .27$ , 95% CI =  $[0.15, 0.38]$ , with German participants ( $M = 7.19$ ,  $SD = 1.67$ ) demonstrating a more pronounced prosocial reaction than Turkish participants ( $M = 4.53$ ,  $SD = 2.70$ ).

The 2 (culture)  $\times$  2 (exclusionary status) ANOVA on antisocial reactions showed a main effect of exclusionary status,  $F(1, 133) = 11.52$ ,  $p = .001$ ,  $\eta_p^2 = .08$ , 95% CI =  $[0.01, 0.18]$ : Excluded participants ( $M = 3.72$ ,  $SD = 2.47$ ) indicated more antisocial intentions than included participants ( $M = 2.37$ ,  $SD = 2.23$ ). The ANOVA moreover revealed a significant interaction,  $F(1, 133) = 5.07$ ,  $p = .026$ ,  $\eta_p^2 = .04$ , 95% CI =  $[0.00, 0.12]$ . An analysis of simple effects illustrated that Turkish participants did not differ between exclusion and inclusion,  $F(1, 133) = 0.65$ ,  $p = .423$ ,  $\eta_p^2 = .005$ , 95% CI =  $[0.00, 0.05]$ ; however, German participants did,  $F(1, 133) = 16.05$ ,  $p < .001$ ,  $\eta_p^2 = .11$ , 95% CI =  $[0.03, 0.21]$ : They showed significantly more proclivity to antisocial behavior in the exclusion compared with the inclusion condition.

The 2 (culture)  $\times$  2 (exclusionary status) ANOVA on avoiding reactions revealed both a significant main effect of exclusionary status,  $F(1, 133) = 12.96$ ,  $p < .001$ ,  $\eta_p^2 = .09$ , 95% CI =  $[0.02, 0.19]$ , and of culture,  $F(1, 133) = 19.89$ ,  $p < .001$ ,  $\eta_p^2 = .13$ , 95% CI =  $[0.04, 0.24]$ . Excluded ( $M = 3.17$ ,  $SD = 2.37$ ) and German participants ( $M = 3.32$ ,  $SD = 2.46$ ) indicated more avoiding intentions than included ( $M = 2.00$ ,  $SD = 1.99$ ) and Turkish participants ( $M = 1.85$ ,  $SD = 1.76$ ). Importantly, the ANOVA also revealed a significant interaction,  $F(1, 133) = 18.34$ ,  $p < .001$ ,  $\eta_p^2 = .12$ , 95% CI =  $[0.04, 0.23]$ . An analysis of simple main effects illustrated again that Turkish participants did not differ between conditions,  $F(1, 133) = 0.23$ ,  $p = .631$ ,  $\eta_p^2 = .002$ , 95% CI =  $[0.00, 0.04]$ , but German participants did,  $F(1, 133) = 31.31$ ,  $p < .001$ ,  $\eta_p^2 = .19$ , 95% CI =  $[0.08, 0.30]$ . As for the antisocial response, they indicated more avoiding behavioral intentions in response to exclusion than inclusion.



**Table 1.** Means and Standard Deviations (in Parenthesis) of Variables as a Function of Exclusionary Status and Culture (Study 3).

	Germany		Turkey	
	Exclusion	Inclusion	Exclusion	Inclusion
Prosocial intention	7.18 (1.73)	7.19 (1.64)	4.83 (2.27)	4.21 (3.09)
Antisocial intention	3.88 (2.25)	1.66 (1.24)	3.57 (2.68)	3.12 (2.76)
Avoiding intention	4.65 (2.24)	2.03 (1.95)	1.74 (1.44)	1.97 (2.07)
Affect	-0.47 (1.42)	2.28 (0.95)	1.03 (0.97)	1.69 (2.25)

**Affective reaction.** We hypothesized the behavioral reaction to be associated with the emotion felt during social exclusion. To investigate the participants' affective reaction, we calculated a 2 (exclusionary status)  $\times$  2 (culture) ANOVA on mood, which revealed a significant main effect of exclusionary status,  $F(1, 135) = 46.57, p < .001, \eta_p^2 = .26, 95\% CI = [0.14, 0.37]$ , and a marginal significant main effect of culture,  $F(1, 135) = 3.31, p = .071, \eta_p^2 = .02, 95\% CI = [0.00, 0.09]$ : Included ( $M = 2.00, SD = 1.70$ ) and Turkish participants ( $M = 1.35, SD = 1.73$ ) displayed more positive mood than excluded ( $M = 0.29, SD = 1.42$ ) and German participants ( $M = 0.96, SD = 1.83$ ). The ANOVA moreover revealed a significant interaction,  $F(1, 135) = 17.56, p < .001, \eta_p^2 = .12, 95\% CI = [0.03, 0.22]$ . Simple main effect analyses showed that only German participants significantly differed in their mood after exclusion compared with inclusion,  $F(1, 135) = 61.97, p < .001, \eta_p^2 = .32, 95\% CI = [0.19, 0.42]$ , Turkish participants differed only marginally,  $F(1, 135) = 3.40, p = .068, \eta_p^2 = .03, 95\% CI = [0.00, 0.10]$ .

To test whether the affective reaction was associated with the behavioral reaction, we calculated separate correlations for each culture. There were no significant correlations among Turkish participants,  $ps > .713$ . Among German participants, however, mood correlated with both antisocial,  $r(69) = -.42, p < .001, 95\% CI = [-0.60, -0.21]$ , and avoiding intentions,  $r(69) = -.51, p < .001, 95\% CI = [-0.67, -0.32]$ : The less positive their affect, the more pronounced was their proclivity to antisocial and avoiding behavior.

For descriptive statistics, see Table 1.

## Discussion

The results of Study 3 provide further evidence for the role of collectivism and individualism in response to social exclusion. We replicated our findings from Studies 1 and 2 in an intercultural design: German and Turkish participants showed different response patterns in their reaction to inclusion versus exclusion. In accordance with our previous findings, individualistic participants showed negative behavioral intentions when dealing with social exclusion; collectivistic participants did not differentiate their behavioral response between conditions. This suggests that, although people of both cultures understood the scenario as an exclusionary event, only German participants felt the need to cope with it.

Extending the findings of Studies 1 and 2, the individualists' response was based on not only a more antisocial but also a more avoiding reaction. Study 3, furthermore, showed that only German participants were affected emotionally by an instance of exclusion, which replicates previous results (Pfundmair et al., 2014). Moreover, the more negative the German participants' affective reaction, the more pronounced were their behavioral intentions. This finding affirms our assumption that emotion during the experience of an exclusionary event is associated with specific coping behavior. Turkish participants, however, showed only a marginal decline of their positive mood when excluded. As the more implicit response, current mood, also approached the expected pattern, one might conclude that the collectivists did not experience the social exclusion induced here as a threat and therefore might not have experienced the need to engage in behavioral coping strategies. However, mood is a rather unreliable indicator in the context of social exclusion as it often causes inconsistent findings: Some authors report an effect on mood (e.g., Leary, Koch, & Hechenbleiker, 2001), others do not (e.g., Twenge et al., 2001), and still others report heterogeneous effects within the same experimental setting (e.g., Zadro et al., 2004). Therefore, we tested the potentially mediating mechanisms using an alternative approach in Study 4.

## Study 4

In the previous studies, we have observed that individualistically oriented people showed proclivity to more negative behaviors after social exclusion, whereas collectivistically oriented people did not. With the collectivists' seemingly muted reaction on both implicit and explicit levels, we suggested that they might not have been threatened to the same extent that individualists have been. Another explanation to the collectivists' response pattern could lie in better buffering by activation of social representations in collectivists: Reminders of social connections after exclusion usually eliminate negative outcomes (Twenge et al., 2007), and collectivists might be better equipped with such representations of connection. In the present study, we intended to examine both explanatory approaches. We implicitly measured both activation of threat- and relationship-/connection-related content and additionally investigated level of threat inherent in social exclusion explicitly. Moreover, in Study 4, we intended to contrast our findings against diverse control conditions to rule out the possibility that collectivists generally show less negative reactions to negative events and to determine whether the individualists' differential intentions are due to the impact of exclusion or inclusion. As in Study 1, we used an essay task to manipulate exclusionary status: Participants were randomly assigned to an exclusion, an inclusion, and additionally a negative non-social, and a neutral condition. As in Study 3, we focused on cross-cultural orientations comparing India as a collectivistic and the

United States as an individualistic culture (Hofstede et al., 2010, classify India [individualism score = 48] as less individualistic than the United States [individualism score = 91]) and assessed behavioral intentions and emotional state by several items. We decided to use a different mood measure in Study 4 to potentially tap into mood effects also in the collectivistic sample. The following hypotheses were tested:

**Hypothesis 1:** We predicted U.S. participants to show differential affect and behavioral intentions after social exclusion versus inclusion; for Indian participants, we expected less differences between inclusion and exclusion in their affect and behavioral intentions.

**Hypothesis 2:** We predicted that this result pattern would be associated with a stronger activation of threat among U.S. participants mediating the found pattern but not a stronger activation of social representations among Indian participants.

**Hypothesis 3:** We predicted that the low intensity of the Indian participants' reaction to exclusion would not be specific to negative events per se.

**Hypothesis 4:** We predicted that the U.S. participants' differential result pattern would be due to the impact of exclusion and not inclusion.

## Method

**Participants.** Two hundred thirty-five persons participated in this study: 118 U.S. participants (61 women, 54 men, and 3 who did not specify gender) and 117 Indian participants (37 women, 77 men, and 3 who did not specify gender) who completed the study through Amazon.com's Mechanical Turk for US\$0.25; they ranged in age from 19 to 69 years ( $M = 34.75$ ,  $SD = 12.65$ ) in the U.S. sample and from 20 to 63 years ( $M = 29.53$ ,  $SD = 8.37$ ) in the Indian sample.

**Design and procedure.** The experiment examined reactions in response to social exclusion, inclusion, and two control conditions (*exclusionary status*: exclusion vs. inclusion vs. negative non-social vs. neutral) in two cultures (*culture*: the United States vs. India). Participants were recruited to participate in an online study on visualization of past experiences in their lives. They were randomly assigned to one of four essay conditions: exclusion, inclusion, academic failure, and yesterday's experiences. As in Study 1, in each condition, participants were asked to remember vividly and write about this previous experience. After writing the essay, they were asked to complete the second part of the questionnaire consisting of mood, behavioral intentions, experience of threat, and implicit activations measures. Finally, they were debriefed and thanked for their participation.

## Materials

**Exclusionary status.** Participants in the exclusion condition were asked to write an essay about a time they were

excluded from one or more close others. Participants in the inclusion condition were asked to write about a time they were included and accepted by one or more close others. In the negative non-social control condition, participants were asked to write about an academic failure. In the neutral control condition, they wrote about all experiences that they had faced the day before.

**Manipulation check.** To assess the effectiveness of the exclusionary status manipulation, participants answered one item ("To what extent did you feel excluded?") on a scale from 1 (*not at all*) to 7 (*very much*).

**Mood.** Participants were asked to assess their current mood using 14 items, 8 items from the Psychological Discomfort Scale (Elliot & Devine, 1994; "uncomfortable," "uneasy," "bothered," "happy," "good," "friendly," "energetic," and "optimistic") and 6 additional items ("cheerful," "depressed," "elated," "sad," "at ease," and "disappointed"). These were displayed on a visual analogue scale marked with 0 = *not at all* at the beginning of the line, 50 in the middle, and 100 = *extremely* at the end of the line. We aggregated the positive mood items ( $\alpha = .91$ ) and the negative mood items ( $\alpha = .90$ ).

**Behavioral intentions.** As in Study 3, participants assessed their behavioral reactions by answering the question of what they did after the experience they just described on three items from 1 (*not at all*) to 7 (*very much*): for the prosocial response, "I socialized with some people"; for the antisocial response, "I paid the negative behavior back in some manner"; and for the avoiding response, "I withdrew from the situation."

**Experience of threat.** To investigate the level of threat inherent in the described experiences, participants responded to five statements ("The experience threw me off the track," "The experience really bothered me," "I perceived the experience as threatening," "The experience played a central role in my life," "The experience caused a lot of consideration in me";  $\alpha = .87$ ) that were rated on scales from 1 (*not at all*) to 7 (*very much*).

**Implicit activation.** To explore participants' implicit activations in course of the described experiences, we used the paradigm of a word search puzzle (e.g., Marsh & Bower, 1993; Webb & Sheeran, 2007). Presented with an 11 × 11 matrix, participants were asked to identify English words of six letters or longer by stringing together the adjacent letters that "touched" in the matrix. Participants were instructed to identify as many words as they liked but at least one word. Constructed with the aid of a computer program, the puzzle's format was relatively easy containing solely forward and downward words with no overlap. It included three words of social ("father," "sister," and "partner"),

threatening (“threat,” “injury,” and “violate”), and control content (“camera,” “bottle,” and “horizon”); each category consisted of two words of six letters and one word of seven letters with similar frequency of occurrence in daily life. To avoid the possible advantage of native speakers finding a larger number of words, we only investigated the category of the words participants identified at first and second.

The questionnaire was administered in English for both U.S. and Indian participants.

## Results

**Manipulation check.** An ANOVA on the manipulation check demonstrated a significant main effect of exclusionary status,  $F(3, 231) = 22.21, p < .001, \eta_p^2 = .22, 95\% \text{ CI} = [0.13, 0.30]$ . Post hoc Fisher’s least significant difference (LSD) tests revealed that participants in the exclusion condition felt significantly more excluded ( $M = 5.52, SD = 1.82$ ) than participants in the inclusion ( $M = 3.09, SD = 2.11$ ),  $p < .001$ , in the negative non-social ( $M = 3.77, SD = 1.98$ ),  $p < .001$ , and in the neutral condition ( $M = 2.86, SD = 1.89$ ),  $p < .001$ . Thus, exclusionary status was perceived as expected.

### Cultural differences

**Behavioral reaction.** The 4 (exclusionary status)  $\times$  2 (culture) ANOVA on the prosocial reaction indicated significant main effects of exclusionary status,  $F(3, 227) = 3.52, p = .016, \eta_p^2 = .04, 95\% \text{ CI} = [0.00, 0.10]$ , and of culture,  $F(1, 227) = 9.10, p = .003, \eta_p^2 = .04, 95\% \text{ CI} = [0.00, 0.10]$ . LSD tests revealed that participants in the exclusion condition ( $M = 4.30, SD = 2.03$ ) did not differ from participants in the negative non-social ( $M = 4.31, SD = 1.90$ ),  $p = .981$ , and in the neutral condition ( $M = 4.43, SD = 1.92$ ),  $p = .701$ ; however, excluded participants showed significantly less prosocial behavior than included participants ( $M = 5.26, SD = 1.48$ ),  $p = .005$ . Across conditions, U.S. participants ( $M = 4.17, SD = 2.03$ ) showed less prosocial intentions than Indian participants ( $M = 4.94, SD = 1.64$ ).

The 4 (exclusionary status)  $\times$  2 (culture) ANOVA on the antisocial reaction only showed a main effect of culture,  $F(1, 227) = 26.54, p < .001, \eta_p^2 = .10, 95\% \text{ CI} = [0.04, 0.18]$ . Indian participants ( $M = 3.56, SD = 1.91$ ) indicated more antisocial behavioral intentions than U.S. participants ( $M = 2.38, SD = 1.70$ ) across conditions.

A 4 (exclusionary status)  $\times$  2 (culture) ANOVA on the avoiding reaction showed significant main effects of exclusionary status,  $F(3, 227) = 15.39, p < .001, \eta_p^2 = .17, 95\% \text{ CI} = [0.08, 0.25]$ , and (marginally) of culture,  $F(1, 227) = 3.81, p = .052, \eta_p^2 = .02, 95\% \text{ CI} = [0.00, 0.06]$ . LSD tests revealed that excluded participants ( $M = 5.10, SD = 1.88$ ) behaved significantly more avoiding compared with included participants ( $M = 2.83, SD = 1.88$ ),  $p < .001$ , participants of the negative non-social ( $M = 4.05, SD = 2.00$ ),  $p = .002$ , and participants of the neutral condition ( $M = 3.54, SD = 2.13$ ),  $p < .001$ . Furthermore, Indian participants ( $M = 4.15,$

$SD = 1.91$ ) showed more avoiding behavioral intentions than U.S. participants ( $M = 3.69, SD = 2.30$ ). Importantly, the ANOVA also revealed a significant interaction,  $F(3, 227) = 5.19, p = .002, \eta_p^2 = .06, 95\% \text{ CI} = [0.01, 0.12]$ . An analysis of simple effects showed that Indian participants did not differ in their avoiding reaction between the four conditions,  $F(3, 227) = 2.04, p = .109, \eta_p^2 = .03, 95\% \text{ CI} = [0.00, 0.07]$ . This suggests that the Indian participants’ undifferentiated reaction was not specific to negative events but was also present when facing neutral situations. U.S. participants, however, did differ between conditions,  $F(3, 227) = 17.37, p < .001, \eta_p^2 = .19, 95\% \text{ CI} = [0.10, 0.27]$ : Excluded participants showed more avoiding behavioral intentions than included participants,  $p < .001$ , than participants in the negative non-social condition,  $p < .001$ , and than participants in the neutral condition,  $p < .001$ . While the avoiding reaction of U.S. participants in the exclusion condition negatively contrasted against the neutral condition, the U.S. participants’ avoiding reaction in the inclusion condition did not differ from the neutral condition,  $p = .184$ , which points to exclusion as the driving force behind this pattern.

**Affective reaction.** The 4 (exclusionary status)  $\times$  2 (culture) ANOVA on positive mood revealed a significant main effect of culture,  $F(1, 227) = 17.97, p < .001, \eta_p^2 = .07, 95\% \text{ CI} = [0.02, 0.15]$ , indicating more positive mood among Indian participants ( $M = 67.71, SD = 18.15$ ) compared with U.S. participants ( $M = 55.71, SD = 23.37$ ). There was also a marginally significant interaction effect,  $F(3, 227) = 2.43, p = .066, \eta_p^2 = .03, 95\% \text{ CI} = [0.00, 0.08]$ . An analysis of simple effects showed that Indian participants did not differ in their positive mood between the four conditions,  $F(3, 227) = 0.94, p = .423, \eta_p^2 = .01, 95\% \text{ CI} = [0.00, 0.04]$ . U.S. participants, however, differed marginally between conditions,  $F(3, 227) = 2.24, p = .085, \eta_p^2 = .03, 95\% \text{ CI} = [0.00, 0.07]$ : Excluded participants indicated less positive mood than included participants,  $p = .081$ , but a similar level of mood as participants in the negative non-social,  $p = .537$ , and neutral condition,  $p = .856$ . To test whether the affective reaction was associated with the behavioral reaction, we calculated separate correlations for each culture. Among Indian participants, positive mood did not correlate with the avoiding intention,  $r(117) = -.15, p = .102, 95\% \text{ CI} = [-0.32, 0.03]$ . Among U.S. participants, however, mood correlated with avoiding behavior,  $r(118) = -.18, p = .051, 95\% \text{ CI} = [-0.35, 0.00]$ : The less positive their affect, the more pronounced was their proclivity to avoiding behavior.

The 4 (exclusionary status)  $\times$  2 (culture) ANOVA on negative mood only revealed a marginally significant main effect of culture,  $F(1, 227) = 3.35, p = .069, \eta_p^2 = .01, 95\% \text{ CI} = [0.00, 0.06]$ . Indian participants ( $M = 29.85, SD = 24.06$ ) indicated more negative mood than U.S. participants ( $M = 24.31, SD = 22.62$ ) across conditions.

**Experience of threat.** Another 4 (exclusionary status)  $\times$  2 (culture) ANOVA on experienced threat indicated significant

**Table 2.** Means and Standard Deviations (in Parenthesis) of Variables as a Function of Exclusionary Status and Culture (Study 4).

	The United States				India			
	Exclusion	Inclusion	Negative non-social	Neutral	Exclusion	Inclusion	Negative non-social	Neutral
Prosocial intention	3.89 (2.12)	5.40 (1.66)	3.74 (1.81)	3.93 (2.18)	4.64 (1.92)	5.14 (1.33)	5.11 (1.74)	4.93 (1.49)
Antisocial intention	2.85 (1.66)	1.80 (1.44)	2.66 (1.92)	2.07 (1.51)	3.58 (1.97)	3.31 (1.97)	3.59 (2.01)	3.79 (1.73)
Avoiding intention	5.67 (1.54)	2.12 (1.72)	3.95 (2.18)	2.82 (2.11)	4.64 (2.01)	3.45 (1.82)	4.19 (1.73)	4.25 (1.94)
Positive mood	54.85 (26.79)	64.97 (20.33)	51.62 (22.22)	53.83 (22.91)	64.52 (19.45)	65.07 (18.57)	69.84 (20.30)	72.17 (12.94)
Negative mood	29.79 (24.57)	16.26 (18.54)	25.15 (23.26)	25.05 (22.28)	33.53 (21.03)	29.24 (25.08)	28.56 (26.10)	27.42 (25.11)
Experience of threat	4.53 (1.50)	2.22 (1.03)	4.56 (1.44)	2.94 (1.61)	4.55 (1.38)	4.06 (1.58)	4.88 (1.33)	4.27 (1.36)

main effects of exclusionary status,  $F(3, 227) = 16.27, p < .001, \eta_p^2 = .18, 95\% \text{ CI} = [0.09, 0.26]$ , and of culture,  $F(1, 227) = 22.03, p < .001, \eta_p^2 = .09, 95\% \text{ CI} = [0.03, 0.16]$ . LSD tests revealed that participants in the exclusion condition ( $M = 4.54, SD = 1.43$ ) experienced significantly more threat than participants in the inclusion ( $M = 3.20, SD = 1.63$ ),  $p < .001$ , and in the neutral condition ( $M = 3.61, SD = 1.62$ ),  $p = .001$ , but similar levels of threat as in the negative non-social condition ( $M = 4.70, SD = 1.39$ ),  $p = .533$ . Moreover, Indian participants ( $M = 4.44, SD = 1.43$ ) indicated more threat than U.S. participants ( $M = 3.67, SD = 1.73$ ). Importantly, the ANOVA also revealed a significant interaction,  $F(3, 227) = 5.13, p = .002, \eta_p^2 = .06, 95\% \text{ CI} = [0.01, 0.12]$ . An analysis of simple effects indicated that Indian participants showed a similar threat level in all four conditions,  $F(3, 227) = 1.77, p = .153, \eta_p^2 = .02, 95\% \text{ CI} = [0.00, 0.06]$ . U.S. participants, however, differed between conditions,  $F(3, 227) = 19.47, p < .001, \eta_p^2 = .20, 95\% \text{ CI} = [0.11, 0.29]$ : Excluded participants indicated more threat than included participants,  $p < .001$ , and participants in the neutral condition,  $p < .001$ , but a similar threat level as participants in the negative non-social condition,  $p = .917$ .

To test whether the culture-moderated avoiding behavioral intention in response to social exclusion (vs. inclusion) was mediated by a different experience of threat, we conducted a moderated mediation analysis using the PROCESS tool by Hayes (2012). The model of threat revealed significant main effects of exclusionary status,  $b = -4.13, SE = .85, t(110) = -4.84, p < .001, 95\% \text{ CI} = [-5.82, -2.44]$ , and culture,  $b = -1.80, SE = .82, t(110) = -2.20, p = .030, 95\% \text{ CI} = [-3.42, -0.18]$ . Importantly, it also indicated a significant interaction between exclusionary status and culture,  $b = 1.82, SE = .53, t(110) = 3.46, p = .001, 95\% \text{ CI} = [0.78, 2.86]$ . Threat mediated the effect of exclusionary status on avoiding behavior among U.S. participants,  $95\% \text{ CI} = [-2.14, -0.85]$ , but not Indian participants,  $95\% \text{ CI} = [-0.75, 0.16]$ . These results suggest a specific process at work linking exclusionary status to behavior depending on culture: This process is the experience of threat. Those excluded faced more threat than those included among U.S. but not Indian participants, and this in turn translated into more avoiding behavior intentions.

**Implicit activation.** To explore the participants' implicit activations of both threat- and relationship-related content, we investigated the relationship between culture and the category (social, threat, control) of words participants identified at first and second in each condition. Analyzing the first word participants identified, chi-square tests showed no significant effects,  $ps > .100$ . Analyzing the second word, chi-square tests revealed a significant relationship in the exclusion condition,  $\chi^2(2, N = 49) = 8.78, p = .012, \text{Cramer's } V = .42$ , but not in the other conditions,  $ps > .122$ : Whereas excluded U.S. participants identified 7 social words, 16 threat words, and 0 control words, excluded Indian participants identified 7 social words, 11 threat words, and 8 control words. Thus, Indian and U.S. participants did not differ in activation of social content; however, U.S. participants showed stronger activation of threat-related and Indian participants of control content.

For descriptive statistics, see Table 2.

## Discussion

Similar to the result patterns of the previous studies, the outcomes of Study 4 suggest that participants with collectivistic background did not differentiate in their behavioral response. However, participants with individualistic background reacted negatively to social exclusion. In Study 4, the individualists' reaction was based on more avoiding behavioral intentions after exclusion (as compared with the more antisocial intentions in Studies 1 and 2). This result pattern could be extended to the affective reaction, as observed in Study 3: The less positive the individualists' affect, the more pronounced was their proclivity to avoiding behavior. In accordance with the idea that the differences found so far have to do with a more intense experience of threat among participants with individualistic cultural background, the behavioral intentions of U.S. and Indian participants in response to exclusion were found to be mediated by a different threat perception. Furthermore, we did not observe a different activation of social representations between the two cultures in our implicit measures but rather different activations of threat-related contents. Study 4, moreover, indicated that the collectivists' undifferentiated reaction was not specific to negative events

per se but represented rather a basic level of expression. It also revealed that the U.S. participants' result pattern was due to the impact of exclusion and not inclusion.

## General Discussion

People with a more individualistic orientation showed differential behavioral intentions in response to social exclusion whereas people with a more collectivistic orientation did not. We observed this pattern using three different manipulations of social exclusion and three different assessments of the participants' behavioral intentions within and between cultures. Looking at individualism/collectivism differences on the individual level within cultures, we found that only participants with a more individualistic orientation showed antisocial behavioral intentions in response to social exclusion—participants with a more collectivistic orientation, however, showed no specific behavioral intentions in response to social exclusion (Studies 1 and 2). In Studies 3 and 4, looking at intercultural differences, we found German and U.S. participants to show antisocial and avoiding intentions dealing with social exclusion, however, Turkish and Indian participants did not show differential behavioral intentions. These studies, moreover, revealed that only German and U.S. participants were significantly affected by an instance of social exclusion emotionally and that this affective reaction was associated with the behavioral intentions. Study 4, finally, indicated that the observed pattern was due to a more intense experience of threat in excluded U.S. participants. Different activations of social representations between cultures could not be detected.

The investigated behavioral intentions represent a secondary step in dealing with social exclusion; here, people have already become aware of the situation and can adapt their behavior. A behavioral reaction to social exclusion is only necessary if there is motivation to deal with a situation (Lazarus, 1966)—and this motivation only emerges from the arousal if a situation is viewed as a threat. Therefore, it seems plausible that only individualistic individuals perceived the current exclusions as a calamity calling for an adaptation of behavior. Collectivistic individuals, however, did not seem to activate an affective alarm system in the first place, which is consistent with them not showing subsequent coping responses. Studies 3 and 4 support this notion, as participants with collectivistic background had only a low or no emotional reaction to social exclusion. Study 4 provides even stronger evidence for this assumption as the differential, cultural-moderated behavioral intentions were caused by a more intense experience of threat in individualistic participants.

It has been proposed that in comparison with people with a more individualistic orientation, those with a more collectivistic orientation have advanced buffering capabilities by activating their social representations (Gardner et al., in press). This suggests that exclusion is perceived as a minor (as opposed to a major) social injury by people with a more collectivistic

orientation. According to Bernstein and Claypool (2012),<sup>1</sup> a minor social injury has been speculated to result in prosocial behavior and a major social injury in antisocial behavior. However, participants with more collectivistic orientation did not show specific behavioral intentions or even stronger activations of social representations after exclusion. The alternative interpretation (to the buffering hypothesis), therefore, seems to be more consistent with the pattern of results that we find here: More collectivistic individuals might not experience social exclusion on the individual level as a threat to the self and consequently have no motivation to cope with it behaviorally.

Our studies are in accordance with recent research: People with a more collectivistic orientation were shown to have less negative mood, higher self-esteem, less aggressive behavioral intentions (Gardner et al., in press), and facilitated recovery after exclusion (Ren et al., 2013). Previous studies moreover found that, using typical exclusion manipulations, only people with individualistic background were affected both in their basic needs of belonging, self-esteem, control, and meaningful existence and in their physical well-being; collectivistic individuals showed no reaction, either in their basic needs fulfillment or in their physical comfort (Pfundmair et al., 2014). Consistent with our present findings, these previous results suggested that collectivists, in comparison with individualists, are affected by social exclusion to a lesser degree.

Do people with collectivistic background not react to instances of social exclusion at all? We have observed marginal and non-significant trends that indicated slight reactions to social exclusion within our collectivistic samples: In Study 3, Turkish participants showed a marginal decrease of positive mood in response to exclusion compared with inclusion,  $p = .068$ ; in Study 4, the Indian participants' trend toward a difference between conditions,  $p = .109$ , indicated more avoiding behavioral tendencies after exclusion compared with inclusion. These findings point out that the collectivists' responses are not caused by a general lack of responsiveness. They rather suggest that collectivists may respond differently (albeit weakly) to exclusion versus inclusion, which, however, does not activate a threat alarm system comparable to individualists.

In the present studies, we have consistently found that people with a more individualistic orientation particularly chose the negative reaction to cope with social exclusion. However, numerous studies have shown that exclusion evokes not only negative reactions but also positive ones, especially when there is reason to not give up on the social relationship (e.g., Maner et al., 2007). Why did our participants choose exclusively negative coping strategies? This result might be explained by the different theories about behavioral reactions to social exclusion: The negative reaction could either reflect a major social injury (Bernstein & Claypool, 2012), an incident that is perceived as particularly unfair, the perception of not having to rely on the relationship

in the future (Richman & Leary, 2009), or perceiving profound threats to control and meaningful existence (Williams et al., in press). Another interpretation of our findings might be the following: Williams, Case, and Govan (2003) have shown that behavior measured explicitly differs from behavior tested with implicit measures. The authors suggest that the behavioral reaction may depend on the method of measurement: Seen behaviors may evoke seemingly positive approach reactions, but underlying feelings may reflect antisocial ones. As our participants reported their behavioral intentions but did not have to present it physically, they might have shown their real and underlying—negative—behavioral reactions.

Why did German-speaking participants prefer antisocial behaviors in Studies 1 and 2 as well as avoiding behaviors in Study 3, and U.S. participants solely avoiding behaviors as observed in Study 4? In the German culture, compared with the U.S. culture, there is a stronger norm to overtly express dislike or displeasure, which may result in a stronger proclivity to antisocial behaviors. U.S. participants who are more restrained in this regard might have expressed their negative response more gently, namely, by social withdrawal. That German participants also chose avoiding behaviors in response to exclusion in Study 3, might have been caused by the specific scenario used as a manipulation (a working context) in which such behavior might be more adaptive.

### Limitations

Some limitations of our findings should be addressed. First, our findings only refer to behavioral intentions and not to actual behavior. Second, relying on self-reported measures has some shortcomings. Although we had guaranteed an anonymous handling of the data and had tried to measure implicit responses to social exclusion by including an independent mood measure and a covert measure of implicit activations, we still cannot rule out the possibility that participants answered in socially desirable ways—especially with regard to the measure of behavioral intentions. Future studies including the measurement of actual behavior would therefore be a valuable addition—on the one hand, to understand the last step in the coping process of social exclusion and, on the other hand, to circumvent the problem of self-reported measurements.

### Implications and Future Research

The particular nature of the differences in behavioral coping with social exclusion for people with more individualistic versus collectivistic orientation, we find here, is characterized by a clear tendency in individualists to actively refuse further positive interactions and, in collectivists, by a lack of motivated behavior in a positive or negative direction. This indicates that cultural differences in social exclusion might not just be due to different regulation styles but due to a different perception of the world. People with a more collectivistic orientation view their identity as a relational entity

(Heine, 2008) suggesting that they experience an event of exclusion on the individual level as less threatening to the core of their self than those whose identity revolves around individual standing. However, what if collectivists who are fundamentally connected to others are faced with threats to their group? Although less vulnerable on the individual level, more collectivistically oriented people might be strongly affected by social exclusion on the group level. Future research should address this important question.

### Conclusion

Our research has examined individualism/collectivism differences in social exclusion, taking into account the self-threat inherent in exclusion: Individuals with a more collectivistic orientation were not only less affected by social exclusion on an immediate psychological stage but also on a secondary behavioral step. We believe that our focus on intra- and intercultural individualism/collectivism differences on the experiential and behavioral level contributes to a more profound understanding of social exclusion and how it can be defined as a threat to the self.

### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

### Note

1. Bernstein and Claypool (2012) induced their low- and high-severity theory from the differentiation of Cyberball and future alone manipulations. Treating the (actual low severe manipulation) Cyberball as major social injury, we took into account that our participants who did not know the game possibly experienced this manipulation in our experiment as more aversive.

### Supplemental Material

The online supplemental material is available at <http://pspb.sagepub.com/supplemental>.

### References

- Aydin, N., Fischer, P., & Frey, D. (2010). Turning to god in the face of exclusion: Effects of social exclusion on religiousness. *Personality and Social Psychology Bulletin, 36*, 742-753.
- Ayduk, O., Downey, G., Testa, A., Yen, Y., & Shoda, Y. (1999). Does rejection elicit hostility in rejection sensitive women? *Social Cognition, 17*, 245-271.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529.
- Bernstein, M. J., & Claypool, H. M. (2012). Social exclusion and pain sensitivity: Why exclusion sometimes hurts and sometimes

- numbs. *Personality and Social Psychology Bulletin*, 38, 185-196.
- Buckley, K. E., Winkel, R. E., & Leary, M. R. (2004). Reactions to acceptance and rejection: Effects of level and sequence of relational evaluation. *Journal of Experimental Social Psychology*, 40, 14-28.
- Downey, G., Frietas, A. L., Michaelis, B., & Khouri, H. (1998). The self-fulfilling prophecy in close relationships: Rejection sensitivity and rejection by romantic partners. *Journal of Personality and Social Psychology*, 75, 545-560.
- Eisenberger, N. I., Lieberman, M. D., & Williams, K. D. (2003). Does exclusion hurt? An fMRI study of social exclusion. *Science*, 302, 290-292.
- Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. *Journal of Personality and Social Psychology*, 67, 382-394.
- Fiske, S. T., & Yamamoto, M. (2005). Coping with exclusion: Core social motives across cultures. In K. D. Williams, J. P. Forgas, & W. von Hippel (Eds.), *The social outcast: Exclusion, social exclusion, exclusion, and bullying* (pp. 185-198). New York, NY: Psychology Press.
- Frijda, N. H. (1986). *The emotions*. Cambridge, UK: Cambridge University Press.
- Gardner, W. L., Jefferis, V. E., & Knowles, M. L. (in press). Never alone: The independent self as a buffer from rejection. *Journal of Personality and Social Psychology*.
- Gardner, W. L., Pickett, C. L., & Knowles, M. (2005). Social snacking and shielding: Using social symbols, selves, and surrogates in the service of belonging needs. In K. D. Williams, J. P. Forgas, & W. von Hippel (Eds.), *The social outcast: Ostracism, social exclusion, rejection, and bullying* (pp. 227-241). New York, NY: Psychology Press.
- Gruter, M., & Masters, R. D. (1986). Ostracism: A social and biological phenomenon. *Ethnology and Sociobiology*, 7, 149-395.
- Hayes, A. F. (2012). *PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling* [White paper]. Retrieved from <http://www.afhayes.com/public/process2012.pdf>
- Heine, S. J. (2008). *Cultural psychology*. New York, NY: W.W. Norton.
- Hitlan, R. T., Kelly, K. M., Shepman, S., Schneider, K. T., & Zaraté, M. A. (2006). Language exclusion and the consequences of perceived exclusion in the workplace. *Group Dynamics: Theory, Research, and Practice*, 10, 56-70.
- Hofstede, G. H. (2001). *Culture's consequences: Comparing values, behaviours, institutions and organizations across nations* (2nd ed.). Thousand Oaks, CA: SAGE.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind* (3rd ed.). New York, NY: McGraw-Hill.
- Knowles, M. L., & Gardner, W. L. (2008). Benefits of membership: The activation and amplification of group identities in response to social exclusion. *Personality and Social Psychology Bulletin*, 34, 1200-1213.
- Lakin, J., & Chartrand, T. L. (2003). Increasing nonconscious mimicry to achieve rapport. *Psychological Science*, 27, 145-162.
- Lalwani, A. K., Shavitt, S., & Johnson, T. (2006). What is the relation between cultural orientation and socially desirable responding? *Journal of Personality and Social Psychology*, 90, 165-178.
- Lazarus, R. S. (1966). *Psychological stress and the coping process*. New York, NY: McGraw-Hill.
- Leary, M. R., Koch, E. J., & Hechenbleiker, N. R. (2001). Emotional responses to interpersonal rejection. In M. R. Leary (Ed.), *Interpersonal rejection* (pp. 145-166). New York, NY: Oxford University Press.
- Maner, J. K., DeWall, N., Baumeister, R. F., & Schaller, M. (2007). Does social exclusion motivate interpersonal reconnection? Resolving the "porcupine problem." *Journal of Personality and Social Psychology*, 92, 42-55.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224-253.
- Marsh, R. L., & Bower, G. H. (1993). Eliciting cryptomnesia: Unconscious plagiarism in a puzzle task. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 19, 673-688.
- Pfundmair, M., Aydin, N., Du, H., Yeung, S., Frey, D., & Graupmann, V. (2014). *Exclude me if you can—Cultural effects on the outcomes of exclusion*. Manuscript submitted for publication.
- Pickett, C. L., Gardner, W. L., & Knowles, M. (2004). Getting a cue: The need to belong and enhanced sensitivity to social cues. *Personality and Social Psychology Bulletin*, 30, 1095-1107.
- Ren, D., Wesselmann, E. D., & Williams, K. D. (2013). Interdependent self-construal moderates coping with (but not the initial pain of) ostracism. *Asian Journal of Social Psychology*, 16, 320-326.
- Richman, L. S., & Leary, M. R. (2009). Reactions to discrimination, stigmatization, ostracism, and other forms of interpersonal rejection: A multimotive model. *Psychological Review*, 116, 365-383.
- Schwarz, N. (1990). Feelings as information: Informational and motivational functions of affective states. In E. T. Higgins & R. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 2, pp. 527-561). New York, NY: Guilford Press.
- Singelis, T. M., Triandis, H. C., Bhawuk, D., & Gelfand, M. (1995). Horizontal and vertical individualism and collectivism: A theoretical and methodological refinement. *Journal of Cross-Cultural Research*, 29, 240-275.
- Twenge, J. M., Baumeister, R. F., Tice, D. M., & Stucke, T. S. (2001). If you can't join them, beat them: Effects of social exclusion on aggressive behavior. *Journal of Personality and Social Psychology*, 81, 1058-1069.
- Twenge, J. M., Zhang, L., Catanese, K. R., Dolan-Pascoe, B., Lyche, L. F., & Baumeister, R. F. (2007). Replenishing connectedness: Reminders of social activity reduce aggression after social exclusion. *British Journal of Social Psychology*, 46, 205-224.
- Warburton, W. A., Williams, K. D., & Cairns, D. R. (2006). When exclusion leads to aggression: The moderating effects of control deprivation. *Journal of Experimental Social Psychology*, 42, 213-220.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.
- Way, B. M., & Lieberman, M. D. (2010). Is there a genetic contribution to cultural differences? Collectivism, individualism

- and genetic markers of social sensitivity. *Social Cognitive and Affective Neuroscience*, 5, 203-2011.
- Webb, T. L., & Sheeran, P. (2007). How do implementation intentions promote goal attainment? A test of component processes. *Journal of Experimental Social Psychology*, 43, 295-302.
- Williams, K. D. (2007). Ostracism. *Annual Reviews of Psychology*, 58, 425-453.
- Williams, K. D., Case, T. I., & Govan, C. L. (2003). Impact of ostracism on social judgments and decisions: Explicit and implicit responses. In J. P. Forgas, K. D. Williams, & W. von Hippel (Eds.), *Social judgments: Implicit and explicit processes* (pp. 325-342). New York, NY: Cambridge University Press.
- Williams, K. D., Case, T. I., Warburton, W., & Richardson, D. (in press). Motivational consequences of ostracism: Pro-social and anti-social reactions. In J. P. Forgas, K. D. Williams, & W. von Hippel (Eds.), *Social motivation: Conscious and unconscious processes*. New York, NY: Cambridge University Press.
- Williams, K. D., Cheung, C. K. T., & Choi, W. (2000). Cyberostracism: Effects of being ignored over the Internet. *Journal of Personality and Social Psychology*, 79, 748-762.
- Williams, K. D., & Jarvis, B. (2006). Cyberball: A program for use in research on interpersonal ostracism and acceptance. *Behavior Research Methods*, 38, 174-180.
- Williams, K. D., & Sommer, K. L. (1997). Social ostracism by one's coworkers: Does rejection lead to loafing or compensation? *Personality and Social Psychology Bulletin*, 23, 693-706.
- Yamaguchi, S. (1994). Collectivism among the Japanese: A perspective from the self. In U. Kim, H. C. Triandis, C. Kagitcibasi, S.-C. Choi & G. Yoon (Eds.), *Individualism and collectivism: Theory, method, and applications. Cross-cultural research and methodology series* (Vol. 18, pp. 175-188). Thousand Oaks, CA: Sage Publications.
- Yamaguchi, S., Kuhlman, D., & Sugimori, S. (1995). Personality correlated of allocentric tendencies in individualist and collectivist cultures. *Journal of Cross-Cultural Psychology*, 26, 658-672.
- Zadro, L. (2004). *Ostracism: Empirical studies inspired by real-world experiences of silence and exclusion* (Doctoral thesis). University of New South Wales, Sydney, Australia.
- Zadro, L., Williams, K. D., & Richardson, R. (2004). How low can you go? Exclusion by a computer is sufficient to lower self-reported levels of belonging, control, self-esteem, and meaningful existence. *Journal of Experimental Social Psychology*, 40, 560-567.
- Zhu, Y., Zhang, L., Fan, J., & Han, S. (2007). Neural basis of cultural influence on self-representation. *NeuroImage*, 34, 1310-1316.