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When it's okay that I don't play:

Social norms and the situated construal of social exclusion

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Abstract

Being excluded and ignored has been shown to threaten fundamental human needs and cause pain. Such reflexive reactions to social exclusion have been conceptualized as direct and unmoderated (temporal need threat model, Williams, 2009). Here we propose an extension and argue that reflexive reactions depend on how social exclusion situations are construed. If being excluded is understood as a violation of an inclusion norm, individuals will react with pain and threat. In contrast, if being excluded is consistent with the prevailing norm, the exclusion situation is interpreted as less threatening and negative reflexive reactions to ostracism should be attenuated. Four studies empirically support this conceptual model. Studies 3 and 4 further show that to guide situated construal, the norm has to be endorsed by the individual. In both Studies 1 and 3, the effect of the norm is mediated by the objective situation's subjective construal.

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Being ostracized, that is, being excluded and ignored, is a powerful threat to fundamental human needs and causes pain (Williams, Cheung, & Choi, 2000). According to the temporal need-threat model of ostracism (Williams, 2009), negative effects are especially strong during the first, *reflexive* reaction to exclusion. While the reflexive reaction was initially conceptualized as invariable, evidence for moderation has accumulated in recent years (Eck, Schoel, & Greifeneder, in press). To account for variability in the reflexive stage, we build on the temporal need-threat model and propose an extension, derived from the perspective of situated social cognition (Smith & Semin, 2004, 2007). Specifically, we suggest that social norms may alter how social situations are construed and interpreted, and that reflexive reactions depend on this subjective situated construal. In doing so, this contribution conceptualizes effects of being excluded as fundamentally situated, and reactions to social exclusion as cognitively mediated.

Crucially, we distinguish between *objective exclusion* and *subjective experiences of exclusion*. *Objective exclusion* refers to the descriptive fact that a person is not a part of a group or activity. In contrast, by *subjective experience of exclusion* we refer to the mostly negative cognitive and affective reactions to exclusion, such as feelings of hurt and threat (Williams, 2009).

Reflexive Reactions to Social Exclusion

The temporal need-threat model of ostracism (TNTM; Williams, 2009) proposes three stages of the exclusion experience: a reflexive, reflective, and resignation stage. The reflexive stage occurs immediately when individuals detect that they are objectively excluded. It is associated with pain, negative mood, and a threat to four fundamental human needs: belongingness, self-esteem, meaningful existence, and control. Williams (2007a) describes the reflexive stage as a “reflexive painful response to any form of exclusion, unmitigated by

situational or individual difference factors” (p. 431). It is supposedly comparable to the feeling of touching a flame, which is “no less painful when it comes from a friendly rather than unfriendly source” (Williams, 2007b, p. 238). Corrective attributions will not be considered and processed before the individual enters the subsequent, reflective stage (Williams, 2009). The assumption of the reflexive stage’s invariability receives empirical support from studies that have failed to document moderation: No matter if participants are socially anxious or not (Zadro, Boland, & Richardson, 2006), are ostracized by outgroup or ingroup members (Fayant, Muller, Hartgerink, & Lantian, 2014; Gonsalkorale & Williams, 2007; Williams, et al., 2000), by humans or a computer (Zadro, Williams, & Richardson, 2004), or lose money for being included (Van Beest & Williams, 2006), initial reactions to objective exclusion were similarly negative and strong.

Recent studies, however, have challenged the assumption of the reflexive stage’s general invariability by providing evidence for moderation. For instance, individuals with traits descriptive of Cluster A personality disorders (Wirth, Lynam, & Williams, 2010) or a collectivistic orientation (Pfundmair et al., 2015) show a less pronounced negative reflexive reaction to exclusion. Other studies reframed the exclusion situation itself and demonstrated that being in a more powerful position than the ostracizers (Schoel, Eck, & Greifeneder, 2014), having better survival chances by being excluded (Van Beest, Williams, & Van Dijk, 2011), or receiving money for being excluded (Lelieveld, Gunther Moor, Crone, Karremans, & van Beest, 2013) lowered reflexive need threat. While some studies also found moderation due to racial ingroup/outgroup differences, the direction of these effects remains unclear (Bernstein, Sacco, Young, Hugenberg, & Cook, 2010; Goodwin, Williams, & Carter-Sowell, 2010; Krill & Platek, 2009). Finally, a recent meta-analysis of 120 Cyberball studies has shown that, overall, moderation in the reflexive stage could be detected (Hartgerink, van Beest, Wicherts, &

Williams, 2015).

Taken together, while early theorizing argued for an invariability of the reflexive stage, more recent studies suggest that reflexive reactions can be moderated. This calls for further theoretical development. To close this gap, we suggest and empirically substantiate an extension of the TNTM. This extension emphasizes that cognition is fundamentally situated, and assumes that objective social exclusion situations need to be subjectively construed as threatening to cause negative reflexive reactions.

Exclusion as Situated Social Construal

Our argument of a subjectively construed exclusion experience is grounded in the perspective of situated social cognition (Smith & Semin, 2004, 2007), which holds that humans derive specific cues and knowledge from aspects of the situation. Relying on these cues, individuals actively construct their interpretation of social reality. To date, there is strong evidence that “cognitive situating” occurs quickly and requires a minimum of cognitive capacity (Smith & Semin, 2004). Consistent with these findings, we suggest that situations of objective exclusion are also subject to cognitive situating and that this construal does not require deliberative thinking: If objective exclusion is construed as a strong threat to one’s inclusionary status, individuals react with great pain. However, construal of the situation may moderate this effect: if an individual perceives the objective exclusion as less threatening to his or her inclusionary status, reflexive negative reactions should be of a much smaller magnitude.

Williams (2009) argued that a general reflexive reaction is evolutionary advantageous, but so is a more fine-tuned response pattern, too. This is especially the case if one takes into account that half of all exclusion situations in everyday life can be explained by situational factors such as social roles or norms (Nezlek, Wesselmann, Wheeler, & Williams, 2012).

Reacting to such a large number of relatively harmless exclusion situations reflexively with a strong degree of pain would unnecessarily deplete cognitive and emotional resources (Baumeister, Twenge, & Nuss, 2002). Moreover, while we agree that it is presumably better to err on the side of caution (Haselton & Buss, 2000), the ability to immediately distinguish between more or less threatening exclusion situations also has possible adaptive advantages. Reacting too strongly to relative “false alarms” can start a vicious cycle of showing inappropriate behavior and, consequently, being excluded by others (Romero-Canyas & Downey, 2005).

Lending empirical support to our assumption of exclusion as a situated social construal, Leary, Tambor, Terdal, and Downs (1995) demonstrated that participants’ self-esteem was more strongly affected when participants were excluded due to preferences of other group members compared to a random exclusion process. Moreover, Eisenberger, Lieberman, and Williams (2003) have found differences in neural activity depending on the context of the exclusion. They observed that activation in the right ventral prefrontal cortex, which is involved in the regulation or inhibition of pain and negative affect, was higher when there was no obvious reason for being excluded compared to if participants could allegedly not play due to technical difficulties.

Such explicit and clear cues which indicate the threat-level of an exclusion episode are often missing in real life. Accordingly, the question remains as to how people can effectively distinguish between instances of exclusion that pose more versus less objective threat.

The Moderating Impact of Social Norms

We suggest that *social norms* act as important situational cues that allow for situating objective exclusion. Social norms are mental representations of appropriate situational behavior (Aarts & Dijksterhuis, 2003) that can either take the form of explicitly stated rules, such as an order or an agreement, or develop implicitly out of individuals’ interactions (Cialdini & Trost,

1998). They entail both a collective agreement about how people *should* behave in a certain situation and an expectation that they *will* behave in that fashion (Gibbs, 1965). Expectations are thus an integral part of social norms, yet can also exist independently. Social norms exist for all situations that individuals have a concept for and guide the situation's construal by providing a normative framework. This framework is presumably active when the individual approaches a situation, and signals which behavior can be expected of others and the degree of threat posed by exclusion. For instance, in some situations, the prevailing implicit norm is to include other people (such as during a game of ball). If individuals are not approached, the inclusion norm is violated and they likely react with strong feelings of threat and pain (see standard Cyberball findings; e.g., Williams, 2009). However, in other situations, the implicit prevailing norm may be that people are supposed to be left alone (such as in a library or in an elevator). If an individual is then excluded, this exclusion is norm-consistent, and thus the individual may experience relatively little threat or pain. In these examples, individuals do not react to objective exclusion per se, but to its subjective cognitive construal as a function of prevailing norms.

To the present date, few studies in the field of social exclusion research have accounted for social norms. Nezlek and colleagues (2012) mention cases of *role-prescribed ostracism* (see also Williams, 2009) and observed in a diary study that participants reported weaker reactions to these incidents. However, there is no experimental research investigating role-prescribed ostracism and it remains unclear which stages are affected by a social role. While we assume that norms may also facilitate recovery, here we suggest that the respective normative framework is already active before and while an individual encounters a situation. Accordingly, norms already guide reactions while the situation occurs, which is why we predict an effect of norms in the *reflexive* stage.

Norm Violations in Previous Social Exclusion Research

Given that the need to belong is a fundamental need (Baumeister & Leary, 1995), it appears plausible that the prevailing norm in most scientific studies and paradigms in which participants are asked to work or play with others is one of inclusion (Wesselmann, Wirth, Pryor, Reeder, & Williams, 2013; Wirth, Bernstein, Wesselmann, & LeRoy, 2015). Being excluded thus likely violates this norm. Supporting this argument, it has been demonstrated that Cyberball participants expect that other players will include them in the game and that they will receive an equal share of throws (Wesselmann, Bagg, & Williams, 2009; Wesselmann, et al., 2013). This is also in line with the observation of brain activity patterns that specifically relate to the aspect of expectancy or rule violation during the game (Bolling et al., 2011; Kawamoto et al., 2012). The presence of an implicit inclusion norm also appears likely for other experimental social exclusion paradigms such as chat room paradigms or getting acquainted tasks, in which “individuals are arbitrarily excluded, and there is little justification for their treatment” (Tuscherer et al., 2015, p. 2).

We further assume that in some cases, the implicit norm of an equal share can be so strong that it is also in place when individuals objectively “profit” from being excluded. For instance, in the KKK-Study by Gonsalkorale and Williams (2007), as well as van Beest and Williams’ Euroball study (2011), the implicit norm was likely one of inclusion and equal sharing (even if that meant equal sharing of losses). Given this normative setup, participants will react with threat and pain, regardless of likability or profit. Interestingly, from this perspective, the finding that reflexive reactions are unalterable may not so much reflect a true state of the world, but a specific choice of experimental situations in which exclusion violates an implicit inclusion norm.

The Present Studies

We here suggest that reflexive reactions to social exclusion depend on situated social cognitions, which are guided by the prevailing norm. We assume that objective exclusion will be experienced as less hurtful if the norm (a) allows for, or even demands, certain forms of exclusion, and (b) states that these forms of exclusion are no threat to the individual's inclusionary status.

We tested these hypotheses in four studies: In Studies 1 and 2, we replace the implicit norm of an "equal share" in the Cyberball paradigm with explicit rules that change the construal of the exclusion situation. In Study 2, we additionally demonstrate that social norms may at least partially account for why power moderates experiences during the reflexive stage. In Study 3, we investigate boundary conditions of the norm's effect by varying whether participants endorse the norm or not. In both Studies 1 and 3, we also test whether the effect of different norms on affective reactions to exclusion is mediated by the situation's subjective construal. Finally, in Study 4 we investigate the effects of a highly internalized social norm.

Sample sizes. Sample sizes were determined based on the following considerations: statistical power of $\geq .90$; large to medium effect sizes of the expected interactions (adjustments were made based on the respective previous studies; G*Power; Faul, Erdfelder, Lang, & Buchner, 2007). In compliance with ethical guidelines, participants were asked for permission to use their data for analysis at the end of all studies; if participants declined, the data was not analyzed.

Study 1

Study 1 aimed to demonstrate that prevailing implicit norms moderate reflexive reactions to social exclusion. To do so, we used the Cyberball paradigm. In Cyberball, participants play an

online ball tossing game with two alleged other participants, who are in fact simulated by the computer (Williams, et al., 2000). We suggest that exclusion in Cyberball violates the implicit norm of an equal share of throws and is therefore perceived as subjectively threatening. In line with general social cognitive models of information use (e.g. Higgins, 1996), we suggest that this implicit norm may be overpowered by other highly accessible and salient norms (Alexander & Gordon, 1971; Smith & Semin, 2004) that frame exclusion as normative. To this end, we created a version of the Cyberball game called *Dislikeball*. In Dislikeball, participants are told that everyone should throw the ball only to the person they like *least* (unless one could not make a decision, in which case one should throw to both players).

We assumed that excluded participants would experience less need threat and hurt in Dislikeball compared to Cyberball. This is because in Dislikeball, objective exclusion from the game should not be interpreted as a threat to the participant's inclusionary status but rather as an indicator that one is liked most. For included participants, we did not expect any differences between the norm conditions as further detailed below. Finally, consistent with a situational construal perspective, we expected the effect of exclusion and the norm on need threat to be mediated by the extent to which participants construed the other players' behavior as hostile.

Method

Participants and design. Participants were recruited online from different German speaking psychology students' mailing lists and online groups (e.g., Facebook group for German psychology students). Eighty-nine participants (74 females, $M_{\text{age}} = 23.76$, $SD = 4.51$) were randomly assigned to a 2 (objective situation: exclusion vs. inclusion) x 2 (norm: Cyberball vs. Dislikeball) between-participants factorial design.

Materials.

Cognitive construal. Hostile construal of the other players' actions was assessed by four items corresponding to the four needs specified by Williams (2009), e.g., "*The other players' behavior shows that they did not want me to take part*" (belongingness); 9-point Likert scales (1 = *not at all*; 9 = *very much*; Cronbach's $\alpha = .66$).

Need fulfillment/threat. Dislikeball is constructed in such a way that objective exclusion (not receiving the ball) and subjective exclusion experiences (it hurts) are not aligned. Because the standard Need Threat Scale focuses on subjective experiences, but also taps into objective exclusion, we decided to construct a new measure, which focuses on subjective exclusion experiences only (henceforth referred to as Need Fulfillment Scale). In particular, participants rated to what extent the following aspects applied to them while playing: "*Acceptance by the other players*" (belongingness); "*appreciation by the other players*" (self-esteem); "*influence on the course of the game*"; (control); and "*attention by the other players*" (meaningful existence), all 9-point Likert scales (1 = *very little*; 9 = *very strong*; Cronbach's $\alpha = .93$). To complement this measure, we also included eight items adapted from prior ostracism studies, henceforth referred to as "Need Threat Scale" (e.g. Van Beest & Williams, 2006; Williams, 2009; Zadro, et al., 2004), all 9-point Likert scales (1 = *not at all*; 9 = *very much*; Cronbach's $\alpha = .88$). Because Need Fulfillment and Need Threat share conceptual overlap for subjective exclusion experiences, the two measures should be highly correlated.

Hurt. Hurt was assessed with two items: "*The other players' behavior hurt me*" and "*The other players were mean to me*" (1 = *not at all*; 9 = *very much*; $\rho = .94$).

Procedure. Participants played a virtual ball-throwing game with two alleged other players. They were either included (i.e., the ball was distributed equally between all three players) or excluded (i.e., they received the ball two times at the beginning and then no more; see

Williams, et al., 2000). Orthogonal to manipulating the objective situation (inclusion; exclusion), we manipulated the prevailing norm. Participants in the standard Cyberball condition received no information about any rule. Participants in the Dislikeball condition were told that the following rule applied to all three players during the game:

“As soon as you have formed an impression of your co-players, please throw the ball only to the person you like least for the remainder of the game. If you feel that you cannot make a decision, throw the ball to both players.”

After the game, the dependent variables were assessed in the order stated above. As a manipulation check, participants indicated what percentage of the throws they had received (Williams, et al., 2000), and how much they felt they were actively participating in the game (5-point Likert Scale, 1 = not at all; 5 = very much). Moreover, participants were asked what they assumed the prevailing norm was before the game began.

Results

Manipulation checks. A 2 (objective situation: inclusion vs. exclusion) x 2 (norm: Cyberball vs. Dislikeball) ANOVA showed that participants in the exclusion compared to the inclusion condition reported receiving fewer throws, $F(1, 85) = 714.33, p < .001, \eta^2 = .89$, 90% confidence interval (CI) = [.86, .91], ($M = 5.81, SD = 3.10$; $M = 31.09, SD = 5.38$, respectively). They also reported less active participation than the inclusion group, $F(1, 85) = 222.17, p < .001, \eta^2 = .72$, 90% CI = [.64, .78], ($M = 1.81, SD = .39$; $M = 3.65, SD = .71$). Note that the norm did not significantly affect objective exclusion (all other $ps > .316, \eta^2 = .00 - .01$).

In Cyberball, 84 % of the participants reported having assumed that the ball should be thrown equally to all other players. In Dislikeball, 91% of the participants correctly restated the rule that the ball should be thrown to the player one liked least.¹

Dependent variables. A 2 (objective situation: included vs. excluded) x 2 (norm: Cyberball vs. Dislikeball) MANOVA on cognitive construal, need fulfillment, need threat, and hurt revealed a significant effect of the objective situation, Wilks' $\lambda = .342$, $F(4, 82) = 39.35$, $p < .001$, $\eta^2 = .66$, 90% CI = [.54, .71], indicating that excluded participants experienced more negative affect and cognitions compared to included participants. There was also a significant effect of the norm, Wilks' $\lambda = .848$, $F(4, 82) = 3.67$, $p = .008$, $\eta^2 = .15$, 90% CI = [.02, .24], which was qualified by the hypothesized norm x objective situation interaction, Wilks' $\lambda = .674$, $F(4, 82) = 9.90$, $p < .001$, $\eta^2 = .33$, 90% CI = [.16, .42].

To further examine the interaction effect, follow-up ANOVAs and simple main effect analyses were conducted for each of the dependent variables. The hypothesized interaction effect was significant for each dependent variable; see Table 1. Excluded participants experienced less negative affect and cognitions in Dislikeball compared to Cyberball (all $ps < .004$, $\eta^2 = .10 - .24$). No such effect was found for the included participants; in fact, for need fulfillment, included participants experienced more need fulfillment in Cyberball compared to Dislikeball ($p = .002$, $\eta^2 = .11$; all other $ps > .109$, $\eta^2 = .00 - .03$). All means (with standard errors) are depicted in Figure 1, see Table S1 for the simple main effect analyses.

Mediation via cognitive construal. We hypothesized that the moderating effects of a social norm on need fulfillment, need threat, and hurt would be mediated by differences in the cognitive construal of the situation. We averaged all dependent variables in a global affect measure (Cronbach's $\alpha = .88$) and tested a mediated moderation model with the SPSS PROCESS macro provided by Hayes (2013), using 5,000 bootstrap estimates. The mediation analysis yielded a significant indirect effect = -1.30, bootstrapped 95% CI = [-2.09, -.73]. The effect remained significant when it was calculated for each of the dependent variables separately.

Discussion

Results of Study 1 suggest that changing prevailing social norms and thereby the subjective construal of the situation affects subjective reflexive reactions to objective social exclusion. Specifically, Dislikeball participants, who were presented with an explicit norm that framed exclusion as no threat to one's inclusionary status, reported less need threat and hurt when being excluded than Cyberball participants, who presumed an implicit inclusion norm to be in place. This moderation effect was mediated by the cognitive construal of the other players' actions. Note that the differences in subjective experiences were observed even though participants correctly detected that they were objectively being excluded in both Dislikeball and Cyberball, thus poignantly illustrating that insight can be gained from conceptually teasing subjective exclusion experiences and objective exclusion apart.

One may wonder why for most comparisons, participants who were included in Dislikeball did not feel worse compared to participants included in Cyberball. However, one should recall that in Dislikeball, participants were allowed to refrain from making a judgment by throwing the ball equally to both co-players. Possibly, included participants assumed that both co-players did not want to make judgments about anyone's likeability, and consequently, no member of the group was ostracized.

Study 2

Study 2 aimed to extend the findings of Study 1 with the following goals in mind: First, in Study 1, the Dislikeball condition entailed more information and was less ambiguous than the Cyberball condition. This methodological difference arose because we added an explicit additional rule to Dislikeball, but relied on the existing implicit inclusion norm in Cyberball. To make sure that the observed pattern of results was not merely due to reduced ambiguity or more

information, we added an “explicit inclusion norm” condition in Study 2.

Second, Study 1 used the admittedly rather counterintuitive explicit rule of *not* throwing to the person one likes best. In Study 2, we aimed to demonstrate the hypothesized moderation effect with a different, more intuitive norm. Our choice fell on social norms resulting from a position of power. A powerful person does not necessarily need to be involved in all of the subordinates’ activities, but should even stay out of certain activities to give them the opportunity to learn. Accordingly, there might be situations from which a powerful person is objectively excluded, but if these situations are acceptable and norm-consistent, subjective exclusion experiences should be attenuated. Interestingly, these assumptions fit with evidence by Schoel and colleagues (2014), who observed that if the excluded individual is literally positioned above the other (excluding) players in Cyberball and therefore “on top” of the situation (i.e., in a powerful situation), reflexive negative effects of ostracism on control and mood were less pronounced.

In Study 2, two thirds of participants were assigned to the role of a trainer and told to train the other players during a game of Cyberball (henceforth referred to as *Trainerball*). Notably, two versions of Trainerball were implemented to manipulate norms: In *Passive-Trainerball*, it was stressed that the trainees should practice on their own (explicit *exclusion* norm). In contrast, in *Active-Trainerball*, it was stressed that the trainer should be included throughout the game (explicit *inclusion* norm). The remaining third of participants was assigned to a Standard Cyberball game without any additional instructions (implicit inclusion norm). We hypothesized that Active-Trainerball and Cyberball do not significantly differ with regard to need fulfillment and hurt. We further hypothesized that participants who were excluded from Passive-Trainerball would report significantly more need fulfillment and less hurt compared to

both Active-Trainerball and Cyberball. This is because in Active-Trainerball, the norm clearly states that the trainer should be included in the game. For excluded participants, the stated norm is thus violated, and hence the social situation should be experienced as threatening despite being in power.

Method

Participants and design. Participants were recruited via Amazon's Mechanical Turk. One hundred and seventy-five participants (85 females, $M_{\text{age}} = 34.92$, $SD = 11.02$) were randomly assigned to a 2 (objective situation: exclusion vs. inclusion) x 3 (norm: Passive-Trainerball vs. Active-Trainerball vs. Cyberball) between-participants factorial design.

Materials. We measured the extent to which participants felt their four fundamental needs were fulfilled or threatened by using four 9-point semantic differentials representing the four needs with the adjectives *rejected – accepted* (belongingness), *devalued – valued* (self-esteem), *powerless – powerful* (control), and *invisible – recognized* (meaningful existence). The four items were combined into a single need threat/fulfillment index (Cronbach's $\alpha = .96$). Hurt was assessed as in Study 1 ($\rho = .93$).

Procedure. The procedure was similar to Study 1, with the following exceptions: While Cyberball participants received no information about any rule, Trainerball participants were told that they had been assigned to the role of a trainer and that they should teach the other players how to throw the ball in the best way. In *Active-Trainerball*, they were told to train their trainees by repeatedly throwing the ball to the other two players who then had to try and imitate the trainer's technique. In *Passive-Trainerball*, participants were told to let the two trainees practice on their own after a few initial demonstration throws. Immediately after the game, participants

filled out the scales assessing the dependent variables and the manipulation checks as described in Study 1.

Results

Manipulation checks. Compared to the inclusion conditions, participants in the exclusion conditions reported receiving fewer throws, $F(1, 168) = 329.27, p < .001, \eta^2 = .66$, 90% CI = [.60, .71], ($M = 7.27, SD = 7.95$; $M = 32.74, SD = 10.15$ respectively) and less active participation, $F(1, 169) = 455.63, p < .001, \eta^2 = .73$, 90% CI = [.72, .80], ($M = 2.17, SD = .73$; $M = 4.46, SD = .67$). There was no significant influence of the norm on objective exclusion (all $ps > .224, \eta^2 = .00 - .02$). The majority of participants also correctly restated their role assignment (99%) as well as the assigned norm (Passive-Trainerball: 72%, Active-Trainerball: 75%, Cyberball: 90%).¹

Dependent variables. A 2 (included vs. excluded) x 3 (Passive-Trainerball vs. Active-Trainerball vs. Cyberball) MANOVA on need threat/fulfillment and hurt revealed a significant effect of the objective situation, Wilks' $\lambda = .593, F(2, 168) = 57.69, p < .001, \eta^2 = .41$, 90% CI = [.31, .48], indicating that excluded participants experienced more negative affect and cognitions compared to included participants. There was also a significant effect of the norm, Wilks' $\lambda = .875, F(4, 336) = 5.78, p < .001, \eta^2 = .06$, 90% CI = [.02, .10], which was qualified by the hypothesized norm x objective situation interaction, Wilks' $\lambda = .897, F(4, 336) = 4.72, p < .001, \eta^2 = .05$, 90% CI = [.01, .09].

To further examine the interaction effect, follow-up ANOVAs and simple main effect analyses were conducted for both dependent variables, see Tables S2 and S3. The hypothesized interaction effect was significant for both need threat/fulfillment, $F(2, 169) = 7.20, p = .001, \eta^2 = .08$, 90% CI = [.01, .10], and hurt, $F(2, 169) = 6.59, p = .002, \eta^2 = .07$, 90% CI = [.02, .14].

Excluded participants experienced more need fulfillment and less hurt in Passive-Trainerball compared to both Active-Trainerball and Cyberball (all $ps < .023$, $d = 0.61 - 1.27$). As expected, there was no difference with regard to need fulfillment between Active-Trainerball and Cyberball ($p = .280$, $d = 0.51$). However, participants reported experiencing less hurt in Active-Trainerball than in Cyberball ($p = .013$, $d = 0.59$). No effect of the norm was found for the included participants (all $ps > .354$, $d = 0.02 - 0.71$). All means (with standard errors) are depicted in Figure 2.

Additionally, because need threat/fulfillment was measured on a 9-point semantic differential between a negative and a positive pole, we compared the group means against the scale midpoint of 5 (representing neither threat nor fulfillment). Need Fulfillment in the inclusion conditions was significantly above the scale midpoint (all $ps < .002$, $d = 0.64 - 0.85$). In contrast, need fulfillment of excluded participants was significantly below the scale midpoint (both $ps < .001$, $d = 0.96 - 2.17$), with the exception of Passive-Trainerball participants, who did not significantly differ from the scale midpoint ($t = -.72$, $p = .476$, $d = 0.13$).

Discussion

The results from Study 2 extend the results of Study 1. In the condition with an explicit norm that rendered exclusion as acceptable (Passive-Trainerball), need threat and hurt were significantly lower compared to the conditions with a prevailing inclusion norm (explicit in Active-Trainerball and implicit in Cyberball). Notably, need fulfillment of Passive-Trainerball participants was not significantly different from the scale midpoint. One way to look at this evidence is that participants in this condition, on average, did not experience subjective threat despite being objectively excluded.

It should be noted that merely putting participants in the more powerful position of a trainer did not result in less need threat compared to Standard Cyberball. Both need threat and hurt were only significantly lower when being a trainer was coupled with a norm that rendered exclusion acceptable. The findings of Schoel and colleagues (2014) might therefore not only be due to more perceived power and control, but to the social norms that are connected to a position of power.

Study 3

We have shown that social norms can change reflexive reactions to exclusion. Implicit to our argument is the assumption that participants are aware of the prevailing norm and also endorse it. To test this implicit assumption, in Study 3 we used a public goods dilemma game that revolved around a debate between four persons. The norm was either to behave cooperatively (equal division of speaking time; inclusion norm) or competitively (unequal division of time; exclusion norm), which either matched the participant's personal preference or not (norm endorsement yes or no). We hypothesized that the exclusion norm should be particularly effective if it is personally endorsed.

This setup further enabled us to test whether it is in fact social norms, or mere expectations, that moderate reactions to social exclusion. If expectations alone were sufficient to moderate *reflexive* reactions to ostracism, then participants who are excluded due to a competitive norm (and therefore expected the exclusion) should generally experience less need threat than participants who were (surprisingly) excluded in spite of the cooperative norm. However, because we assume that the "should" component of the social norm is essential for situating social exclusion, we expected that only excluded participants who had previously endorsed a general agreement to behave competitively would experience less negative affect and

cognitions compared to participants who either experienced a cooperative norm violation or personally disagreed with a competitive norm.

Method

Participants and design. One hundred and eighty participants (113 females, $M_{\text{age}} = 21.43$, $SD = 2.65$) were recruited online from different German speaking students' mailing lists and online groups. The design was a quasi-experimental 2 (personal vote: competitive vs. cooperative) x 2 (norm: competitive vs. cooperative) between-participants factorial design. Participants voted for either a competitive (38 participants) or a cooperative agreement (132 participants). Within each vote group, half of the participants were randomly assigned to one of the two norm conditions. Note that all participants were excluded in Study 3.

Materials and procedure. Participants were told to mentally visualize a debate with three other speakers. In order to make the exclusion more realistic and build up an actual expectation of what the others would decide, participants did not know that the other "speakers" were fictional persons. Participants were further told that they would make an agreement with the other speakers about whether speaking time should be distributed cooperatively or competitively. Cooperative behavior meant an equal division of time, namely 15 minutes for each speaker. Competitive behavior meant that every speaker could try to secure a maximum speaking time regardless of the others.

The procedure to reach the agreement was as follows: Participants first voted for their personal preference of whether they wanted the group to act cooperatively or competitively (the personal vote). Next, participants were presented with the other speakers' alleged votes. The resulting agreement (the social norm) was determined by the majority of votes: cooperative (inclusion norm) or competitive (exclusion norm). For half of the participants, the other

speakers' votes matched their own (i.e., all four speakers voted for either a cooperative or a competitive agreement); for the other half, all other speakers voted differently than the participant and so the participant disagreed with the social norm.

After the agreement had been made, participants rated their perceived similarity with the other speakers on three items, e.g., "*Aside from content-related opinions, the other participants and I have similar values,*" (all 9-point Likert scales; 1 = *not at all*; 9 = *very much*; Cronbach's $\alpha = .86$).

Participants were told that a random algorithm would determine the speaking order. All participants then learnt that they were placed last. Subsequently, the fictional debate started and participants were told to imagine it as vividly as possible. In order to make the exclusion situation more real and similar to other exclusion manipulations such as Cyberball, the description of how each speaker defended his or her positions and how much time each speaker took were presented successively. Because the other three speakers each took the maximum time of 20 minutes, participants were not able to contribute (i.e., were excluded). The fact that the participant would be excluded from the debate thus became apparent only during its course.

As dependent variables, need threat/fulfillment (Cronbach's $\alpha = .79$), mood, and hurt ($\rho = .85$) were assessed; see Study 1. Moreover, participants answered three more items about how they construed and evaluated the other speakers' behavior, e.g., "*I do not blame the other speakers for their behavior in the debate*" (all 9-point Likert scales; 1 = *strongly disagree*; 9 = *strongly agree*; Cronbach's $\alpha = .87$).

To assess whether participants understood the manipulation correctly, they were asked how much speaking time had been available to them. Furthermore, participants were asked what

the majority of the speakers had voted for and whether the other speakers' actual behavior corresponded to this agreement.

Results

Manipulation checks. A 2 (personal vote: cooperative vs. competitive) x 2 (norm: cooperative vs. competitive) ANOVA on perceived similarity revealed a significant interaction, $F(1,176) = 59.38, p < .001, \eta^2 = .25, 90\% \text{ CI} = [.16, .34]$. Participants perceived themselves as more similar to the other speakers when all had voted for the same agreement (all cooperative: $M = 5.70, SD = 1.51$, all competitive: $M = 5.95, SD = 1.78$) compared to when they had voted for a different agreement (all others cooperative: $M = 4.48, SD = 1.56$, all others competitive: $M = 2.98, SD = 1.39$). Almost all participants confirmed that less time had been available to them than to the other speakers (99 %) and that they spoke for less than five minutes (100 %). Moreover, 98 % correctly recalled the general agreement and 99 % recalled whether the other speakers had abided by it or not¹.

Dependent variables. Because of the unequal group distribution, we first tested for variance homogeneity of the dependent variables.² A (personal vote: cooperative vs. competitive) x 2 (norm: cooperative vs. competitive) MANOVA on need threat/fulfillment, mood, hurt, and evaluation of the other speakers' behavior revealed a significant main effect of the norm, $F(4,173) = 10.92, p < .001, \eta^2 = .20, 90\% \text{ CI} = [.11, .27]$, and of personal vote, $F(4,173) = 8.08, p < .001, \eta^2 = .16, 90\% \text{ CI} = [.07, .22]$. Most important, the hypothesized interaction was significant, $F(4,173) = 4.44, p = .002, \eta^2 = .09, 90\% \text{ CI} = [.02, .15]$. To further examine the interaction effect, follow-up ANOVAs and simple main effect analyses were conducted for each of the dependent variables. The hypothesized interaction effect was significant for every dependent variable, except for mood (see Table 2). Simple main effect

analyses showed that participants in the competitive norm condition experienced less negative affect and cognitions when they had previously endorsed the competitive compared to the cooperative norm (all $ps < .019$, $\eta^2 = .03 - .21$). All means (with standard errors) are depicted in Figure 3, see Table S4 for the simple main effect analyses. There was no significant difference regarding the personal vote when the norm had been cooperative (all $ps > .320$, $\eta^2 = .00 - .01$)

Mediation via construal. We tested two mediated moderation models as described in Study 1, with the Norm x Personal Vote interaction as the predictor, construal of the other speakers' behavior as the mediator, and need fulfillment or hurt, respectively, as the dependent variable. Both mediation analyses yielded significant indirect effects (for need fulfillment: indirect effect = .75, bootstrapped 95% CI = [.32, 1.27]; for hurt: indirect effect = - 1.96, bootstrapped 95% CI = [-3.05, -.91]).

Discussion

Study 3 demonstrated that the effect of a given social norm on the exclusion experience depends on whether the excluded individual endorses this norm. Participants who had previously endorsed a competitive norm experienced less negative affect and cognitions compared to participants in all other conditions. The present results suggest that two things need to work in tandem to diminish the negative effects of exclusion: a strong social norm, which renders exclusion acceptable, and endorsement of the norm by the excluded individual.

For mood, the pattern of results fits our hypothesis but was not significant. Possibly, having no speaking time at all in an important debate is highly disappointing and therefore resulted in a negative mood across conditions ($M = 2.52$, $SD = 1.66$, on a 9-point scale).

Study 3 further demonstrates that an expected exclusion (the competitive norm condition) can hurt just as much as an unexpected exclusion. From a norm perspective, this is not

surprising: If expectation alone was sufficient to diminish the pain of social exclusion, long-time ostracism and the silent treatment punishment should be less efficient because individuals would expect to be excluded. Still, research has shown that these treatments are highly efficient and hurtful to victims (Williams, 2009). Expectation may therefore be necessary but not sufficient; against the background of the presented evidence, we suggest that the “should” component of a norm is essential for how objective exclusion is cognitively construed.

Study 3 did not have an inclusion group. This choice was motivated by our interest in the interplay between personal and social norms. Nevertheless, an inclusion group might have been advantageous to test whether excluded participants felt excluded. While we cannot offer a comparison between exclusion and inclusion within Study 3, it is interesting that the means of need fulfillment and hurt in Study 3 are comparable to those in the exclusion groups of Studies 1 and 2. Moreover, almost all participants correctly identified that they had received less time than other participants. Hence, it would seem that exclusion was successfully manipulated.

Study 4

Studies 1–3 provide evidence for the hypothesized role of social norms in construing social exclusion. However, in all studies, the norm was experimentally manipulated and might not be as strong as deeply rooted social norms in real life. With the goal to investigate a highly internalized norm, which participants either strongly endorse or not, Study 4 investigated exclusion from an online political debate due to gender quotas. Gender quotas are subject to heated debates in Germany, with left-wing parties arguing for and conservative as well as liberal parties (here referred to as right-wing parties) arguing against quotas. We expected that compared to being included, right-wing participants would feel threatened by being excluded because of a gender quota. This is because the quota violates their party’s norm. In contrast, we

expected left-wing participants to feel less threatened when being excluded by a gender quota, since the exclusion is in line with their party's norm.

Method

Participants and design. Seventy-three members of the political left-wing camp (Bündnis 90/Die Grünen: 43, SPD: 26, and Die Linke: 4), and 65 members of the right-wing camp (FDP: 22, CDU/CSU: 40 and AfD: 3) were recruited as participants (37 females, $M_{\text{age}} = 23.77$, $SD = 3.74$) through different mailing lists and online groups.

The design of the study was a quasi-experimental 2 (political camp: left-wing vs. right-wing) x 2 (objective situation: exclusion vs. inclusion) between-participants factorial design. We opted for an equal distribution of male and female participants into the different conditions.

Materials and procedure. Participants first answered 18 knowledge questions about the German political system (based on Epple, Fischer, Waag, & Wagener, 2013) and received feedback about the number of correct responses. The questions were relatively easy so that all participants scored highly ($M = 17.09$, $SD = 1.78$). Next, participants were told that performance-wise, they had qualified for participation in a subsequent political online debate. All participants learned that, currently, more contributions to the online discussion had been written by individuals whose gender matched the participants' gender (62 %). However, participants in the inclusion condition were told that they could participate anyway. Participants in the exclusion condition were told they could not participate in the discussion because of the gender distribution.

As dependent variables, need threat/fulfillment (4 items, Cronbach's $\alpha = .79$) and mood (1 item) were assessed; see Study 3. Moreover, participants answered three items about their attitude towards gender quotas, e.g., *"I think that gender quotas generally make sense"* (all 9-

point Likert scales; 1 = *strongly disagree*; 9 = *strongly agree*; Cronbach's $\alpha = .98$). Finally, participants were asked what they had been told after the knowledge test and whether the majority of contributors to the online discussion had been male or female.

Results

Manipulation checks. Of all participants, 96 % correctly recalled that there had been more contributions of the opposite gender in the online debate, and 93% whether and why they were (not) allowed to participate in the online discussion. Left-wing participants reported significantly more approval of gender quotas than right-wing participants, $F(1, 134) = 131.96, p < .001, \eta^2 = .50, 90\% \text{ CI} = [.40, .57], (M = 6.73, SD = 2.57, M = 2.37, SD = 1.78; \text{ respectively})$. Neither the effect of exclusion nor the interaction were significant (both $ps > .136, \eta^2 = .00 - .02$).

Dependent variables. Since the study focuses on gender quotas, we entered gender as a third fixed factor into the analyses. Overall, women reported more need fulfillment than men, $F(1, 130) = 4.96, p = .028, \eta^2 = .04, 90\% \text{ CI} = [.00, .10], (M = 4.68, SD = 1.77; M = 4.10, SD = 1.60, \text{ respectively})$. Aside from this main effect, gender interacted with none of the independent variables and was therefore dropped from further analyses.

Regarding need fulfillment, there was a significant main effect of the political camp, $F(1, 134) = 23.26, p < .001, \eta^2 = .15, 90\% \text{ CI} = [.07, .24]$. Left-wing participants experienced more need fulfillment than right-wing participants ($M = 4.84, SD = 1.50; M = 3.60, SD = 1.56, \text{ respectively}$). Moreover, there was a main effect of the objective situation, $F(1, 134) = 8.18, p = .005, \eta^2 = .06, 90\% \text{ CI} = [.01, .13]$, which was qualified by the hypothesized interaction, $F(1, 134) = 3.40, p = .067, \eta^2 = .03, 90\% \text{ CI} = [.00, .08]$. Simple main effects analysis showed that for left-wing participants, there was no significant difference between inclusion and exclusion, $F < 1, p = .461, \eta^2 = .00$. In contrast, right-wing participants experienced significantly more need

fulfillment when they were included compared to excluded, $F(1, 134) = 10.49, p = .002, \eta^2 = .07$. Finally, both included and excluded left-wing participants experienced significantly more need fulfillment than right-wing participants, both $ps < .036, \eta^2 = .03 - .15$.

For mood, there was a significant main effect of the political camp, $F(1, 134) = 21.48, p < .001, \eta^2 = .14, 95\% CI = [.06, .23]$. Left-wing participants generally felt better than right-wing participants ($M = 5.51, SD = 1.89; M = 4.05, SD = 1.77$, respectively). There was neither a significant main effect of the objective situation on mood nor a significant interaction, all $ps > .185, \eta^2 = .00 - .01$. However, the observed pattern of results matches the one observed for need fulfillment. All means (with standard errors) are depicted in Figure 4, see Table S5 for the simple main effect analyses

Discussion

In Study 4, we investigated social exclusion due to a preexisting, internalized norm of the participant's political party, namely the desirability of gender quotas. Results show that left-wing participants who were excluded from an online discussion because of a norm-consistent gender quota experienced neither a decrease in need fulfillment nor mood compared to being included. Right-wing participants, in contrast, reported a lower degree of need fulfillment when they were excluded compared to included. For mood, we observed a similar pattern of results.

On the conceptual level, the results suggest that the typical negative reflexive effects of social exclusion are less likely to show in the presence of a sufficiently strong prevailing norm that (a) renders exclusion as acceptable and (b) one identifies with. In fact, exclusion due to a norm that is highly central to the self may even reinforce individuals' values and make them experience a high sense of belonging to the respective group (Gómez, Morales, Hart, Vázquez, & Swann, 2011; Pfundmair, Aydin, Frey, & Echterhoff, 2014; Pfundmair, Graupmann, Frey, &

Aydin, 2015; Ren, Wesselmann, & Williams, 2013). Since all participants realized that they were objectively excluded nevertheless, this again stresses our main prediction that reactions to objective exclusion can differ greatly, depending on one's social construal of the respective exclusion situation.

General Discussion

Research has accentuated the potential evolutionary advantage of a quick reflexive reaction to social exclusion (Williams, 2009). Though early theorizing argued that reflexive reactions to ostracism are invariable, more recent thinking and evidence suggests that reflexive reactions are mutable and subject to moderation. Indeed, social cognition research holds that social situations are subjectively construed. Bringing this situated social cognition perspective (Smith & Semin, 2004) to ostracism research, we advance an important conceptual extension to the temporal need threat model. We argue that the degree of threat and hurt an individual will experience when facing an objective exclusion depends on how the incident is cognitively construed. We further introduce social norms as a prominent moderator that guides these construals. Norms presumably act as an important framework that helps individuals distinguish between objective exclusion situations that more or less threaten one's inclusionary status. Four studies empirically support these conjectures and show that (a) being objectively excluded hurts less when exclusion is norm-consistent, (b) norms are more effective when personally endorsed, and (c) the effect of norms is mediated by cognitive construal.

Methodology

At least three methodological aspects of the present contribution deserve short mention: First, post-hoc tests showed that the desired power of $\geq .90$ was obtained for almost all hypothesized interactions in the multivariate analyses, except for Study 4 (power = .42; here the

intended sample could not fully be reached due to its specificity, i.e., political party members). Second, the hypothesized effect of social norms on reflexive reactions shows clearly and consistently in all four studies. Importantly, in all studies, participants understood that they were objectively excluded, regardless of the norm manipulations. Third, aside from demonstrating the effect in established paradigms such as Cyberball, we created new paradigms suitable for manipulating social exclusion (Studies 3 and 4), as well as more abstract scales that can assess the effects of social exclusion in a variety of paradigms. As a potential caveat, it should be noted that the paradigm used in Study 3 contains hypothetical elements, such that the participants did not participate in an actual discussion but imagined it. However, research has repeatedly demonstrated that participants experience social exclusion even in very abstract and imaginative tasks (Bernstein & Claypool, 2012; Zadro, et al., 2004). In fact, even Cyberball is presented as a “mental visualization exercise” (Williams, 2009) and thus inherently imaginative. Against this background, we believe that reflexive reactions can also be documented in hypothetical settings as those chosen here.

Integration with the Temporal Need-Threat Model of Ostracism

At first glance, the reported results appear to be inconsistent with the TNTM’s assumption of an automatic response to social exclusion (Williams, 2007a, 2009). We believe that the two perspectives integrate very well, though, if “automatic” is understood in the sense of a “default,” resulting from the fundamental need to belong. However, norms other than the default may be applicable, accessible, and perhaps salient, and when such a norm portrays objective exclusion as acceptable, individuals will perceive the situation as less threatening.

Still, one might argue that the present findings do not integrate very well with earlier findings that showed reflexive reactions to be unmoderated (see Williams, 2009). However, we

contend that a situated perspective is the first to allow understanding of these perhaps surprising earlier results: If the norm implicit to most social exclusion paradigms is one of inclusion (think of equal share in Cyberball), being excluded violates the norm and thus hurts. Hence, findings suggesting that being excluded in Cyberball always hurts may potentially result from a specific set of norms present in these games. Note that this insight does not diminish the importance or value of these earlier results, as norm-violation and objective exclusion may go together more often than not.

By the same token, a situated perspective on the TNTM allows for theoretically derived predictions regarding moderation during the reflexive stage, which were not possible before. With a necessary note of caution, it is interesting to take a look at earlier evidence of moderation from a norm perspective. For instance, moderation via differences in power (Schoel, et al., 2014) might additionally be due to differences in norms applying to more or less powerful people. In support of this account, Study 2 in the present manuscript suggests that changes in the prevailing norm affect the extent to which participants in powerful roles feel threatened and hurt when being excluded. Relatedly, Pfundmair and colleagues (2015) showed that collectivists experience less reflexive need satisfaction than individualists and that this effect was mediated by perceptions of threat. Converging with our assumptions, the authors speculate that their findings might be “potentially mediated by cultural norms” (p. 10). More generally, we contend that social norms are particularly important in situations in which a moderator affects either the understanding or the construal of the prevailing norm, and that a social situated perspective on social exclusion may allow for building a comprehensive framework.

Social exclusion: Flame or Boogeyman?

Williams (2007b) compared social exclusion to touching a flame: it always hurts. We suggest that the exclusion detection system can be understood as a more fine-tuned process that does not detect social exclusion in general, but rather possible norm violations affecting one's inclusionary status. Therefore we suggest that social exclusion is less like a flame, but instead better described as something shadowy in the corner of a room: If one interprets this shadow to be the Boogeyman, one will invariably feel threatened and react with fear. However, if one interprets the shadow to be a coat stand, experiences of threat and fear are likely to be less pronounced. In the same way, we suggest that individuals approach a situation with a normative frame about whether they should be excluded or included in the ongoing events.

Based on our current findings, we are confident to say that norm-consistent exclusion causes *less* reflexive pain reactions than its norm-violating counterpart. But if norm consistency can attenuate the pain associated with social exclusion, would it be possible for an exclusion experience to not hurt *at all*? Our present results are mixed in that regard: While there were no significant differences between norm-consistent exclusion and inclusion groups regarding hurt in Studies 1 and 2, differences in need fulfillment remained (even though in Study 2, need fulfillment in the exclusion norm condition did not differ from the scale midpoint of the semantic differential, which might suggest that participants in this condition did not experience threat). In Study 4, individuals who endorsed the social exclusion norm (i.e., left-wing party members) experienced the same amount of need fulfillment regardless of whether they were excluded or included.

We assume that from a theoretical standpoint, it is possible to identify situations in which social exclusion does not elicit reflexive pain at all. Such cases would most likely be characterized by an unambiguous and highly endorsed prevailing social norm as well as a

situation that leaves little room for alternative interpretations. Study 4 might represent such an example of an unambiguous situation (at least for left-wing participants). In contrast, experimentally manipulated social norms may not be able to completely overpower deeply rooted implicit norms, such as the norm of an equal share of throws in Cyberball. Moreover, in many situations in the laboratory as well as in real life, the prevailing norm may be unclear, the individual might at least partially disagree with the norm, or there may be more than one cognitive construal of the situation that is accessible. In that case, individuals might go with their default reaction and interpret the situation at least to some degree as threatening to be on the safe side. In terms of our “Boogeyman Analogy,” it is more likely that a coat stand would be mistaken for the Boogeyman than the Boogeyman for a coat stand. Future research could investigate the exact conditions under which norm-consistent exclusion results in no pain or merely less pain.

Implications beyond Objective Exclusion Situations

We wish to close by changing the perspective to episodes of mistaken or involuntary ostracism. While in many social situations there should be an understanding about the appropriate behavior, misunderstandings are possible if people differ in their understanding of the prevailing situational norms. Taking that idea further, it might be possible to prevent individuals from suffering from cases of involuntary ostracism by highlighting the prevailing norm or teaching individuals new norms, such as Walton and Cohen (2011) did in a brief intervention study with freshmen students of African American heritage. By pointing their participants to the fact that experiencing social insecurity during one’s first year is normal and not to be interpreted as discrimination or ethnic deficit, they provided them with a less threatening frame for interpreting social challenges at college. As a result of the intervention,

students were more confident, less concerned about being excluded, and acted accordingly (e.g., by initiating more relationships).

Both this study and our own work highlight the importance of social construal. The present findings situate social exclusion and highlight the importance of understanding how individuals subjectively construe the situation they are in. We believe that further research on both causes as well as cures to social exclusion will highly benefit from adapting such a situated view.

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Footnotes

¹ For Study 1 as well as for the subsequent studies, we ran all analyses again without participants who failed to answer all manipulation checks correctly. Neither the result patterns nor the levels of significance changed (except for one interaction in Study 4).

² For need fulfillment, variances were heterogeneous, $F(3, 176) = 2.82, p = .040$. We therefore specified a planned contrast (Rosenthal & Rosnow, 1985) testing the competitive/competitive condition against all other conditions and correcting for unequal variances, which was significant, $t(21.04) = 2.23, p = .037, d = 0.54$. Other possible contrasts were not significant, all $ps > .064, d = 0.18 - 0.30$, (see Petty, Fabrigar, Wegener, & Priester, 1996).

Table 1

Results of four Analyses of Variance of the Dependent Variables in Study 1

| Dependent Variable | Independent Variable | $F(1, 85)$ | η_p^2 | 90% CI |
|------------------------|---|------------|------------|------------|
| Cognitive Construal | Objective Situation (Exclusion vs. Inclusion) | 82.88*** | .49 | [.37, .59] |
| | Social Norm | 6.84* | .07 | [.01, .17] |
| | Objective Situation x Social Norm | 23.11*** | .22 | [.10, .33] |
| Need Fulfillment | Objective Situation | 103.50*** | .55 | [.43, .63] |
| | Social Norm | .14 | .00 | [.00, .04] |
| | Objective Situation x Social Norm | 23.00*** | .21 | [.10, .33] |
| Need Threat | Objective Situation | 105.41*** | .55 | [.43, .64] |
| | Social Norm | 3.47 | .04 | [.00, .12] |
| | Objective Situation x Social Norm | 6.11* | .07 | [.01, .16] |
| Hurt | Objective Situation | 43.49*** | .34 | [.20, .45] |
| | Social Norm | 11.77** | .12 | [.03, .23] |
| | Objective Situation x Social Norm | 14.56*** | .15 | [.05, .26] |

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

Table 2

Results of four Analyses of Variance of the Dependent Variables in Study 3

| Dependent Variable | Independent Variable | $F(1, 176)$ | η_p^2 | 90% CI |
|-------------------------------------|-----------------------------|-------------|------------|------------|
| Need Threat/ Fulfillment | Personal Vote | 2.90 | .02 | [.00, .06] |
| | Social Norm | 4.30* | .02 | [.00, .14] |
| | Personal Vote x Social Norm | 4.56* | .03 | [.00, .14] |
| Mood | Personal Vote | 1.99 | .01 | [.00, .15] |
| | Social Norm | .45 | .00 | [.00, .03] |
| | Personal Vote x Social Norm | 2.06 | .01 | [.00, .05] |
| Hurt | Personal Vote | 12.21** | .06 | [.04, .24] |
| | Social Norm | 11.50** | .06 | [.03, .23] |
| | Personal Vote x Social Norm | 8.35** | .05 | [.02, .19] |
| Evaluation of the other speakers | Personal Vote | 31.18*** | .15 | [.14, .38] |
| | Social Norm | 40.81*** | .19 | [.19, .44] |
| | Personal Vote x Social Norm | 17.55*** | .09 | [.06, .29] |

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

Figure 1 a - d

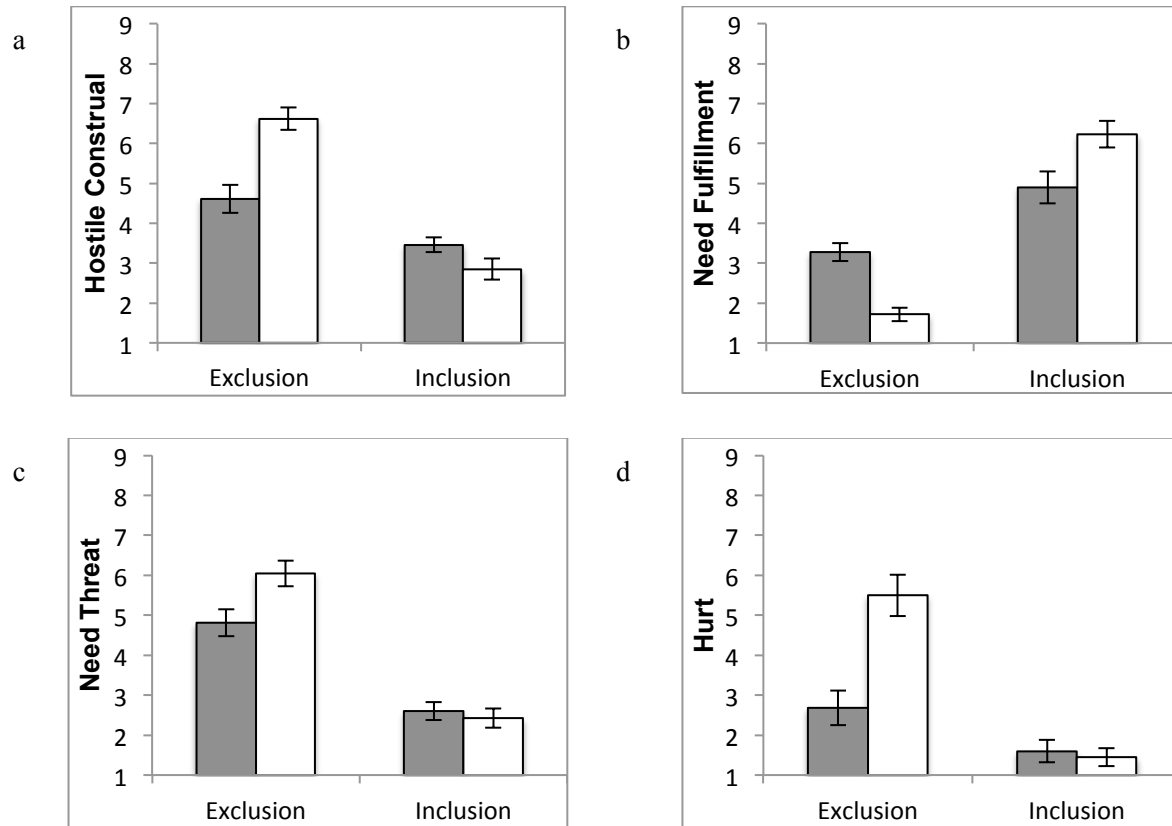


Figure 1 a -d. Mean levels of the dependent variables (with standard errors) as a function of the objective situation (exclusion; inclusion) in Study 1. Dislikeball (the exclusion norm condition) is displayed as gray bars; Cyberball (inclusion norm condition) is displayed as white bars.

a: Cognitive construal of the other players' actions. Higher values reflect a more hostile construal of the other players' actions.

b: Need fulfillment. Higher values reflect more need fulfillment.

c: Need threat. Higher values reflect more threat.

d: Hurt. Higher values reflect more hurt.

Figure 2 a - b

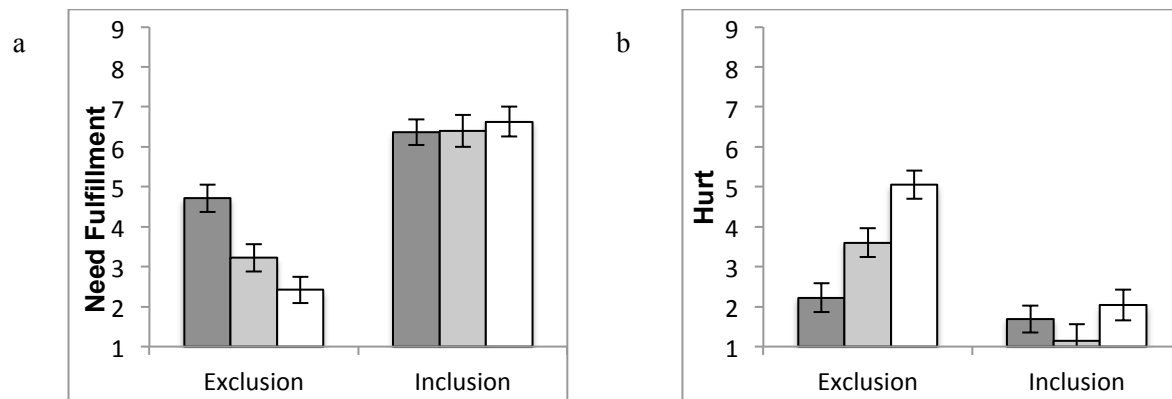


Figure 2 a -b. Mean levels of the dependent variables (with standard errors) as a function of the objective situation (exclusion; inclusion) in Study 2. Passive-Trainerball (explicit exclusion norm condition) is displayed as dark gray bars; Active-Trainerball (explicit inclusion norm condition) as light gray bars and Cyberball (implicit inclusion norm condition) is displayed as white bars.

a: Need fulfillment. Higher values reflect more need fulfillment.

b: Hurt. Higher values reflect more hurt.

Figure 3 a – d

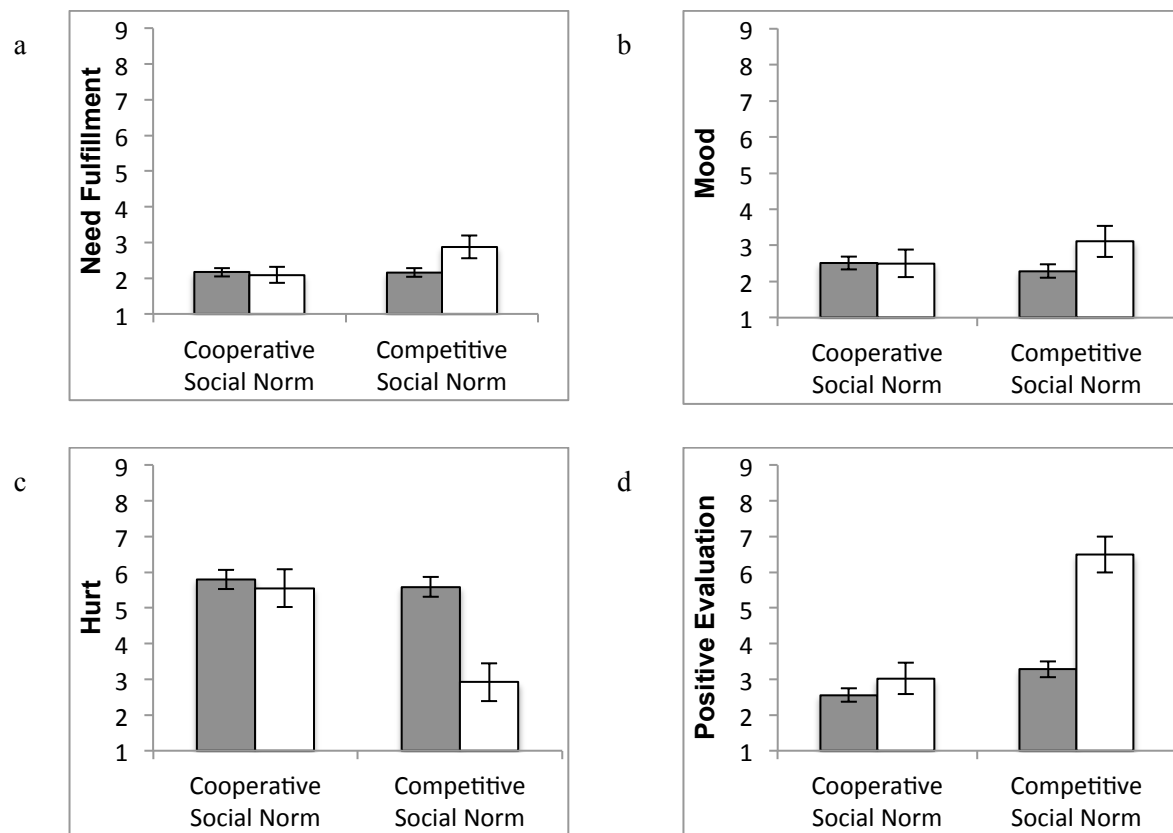


Figure 3 a -d. Mean levels of the dependent variables (with standard errors) as a function of social norm (competitive; cooperative) in Study 3. Conditions in which participants endorsed a cooperative agreement are displayed as gray bars; conditions in which participants endorsed a competitive agreement are displayed as white bars. Note that all participants were objectively excluded in Experiment 3.

a: Need fulfillment. Higher values reflect more need fulfillment.

b: Mood. Higher values reflect more positive mood.

c: Hurt. Higher values reflect more hurt.

d: Evaluation of the other speakers' behavior. Higher values reflect more positive evaluation.

Figure 4 a – b

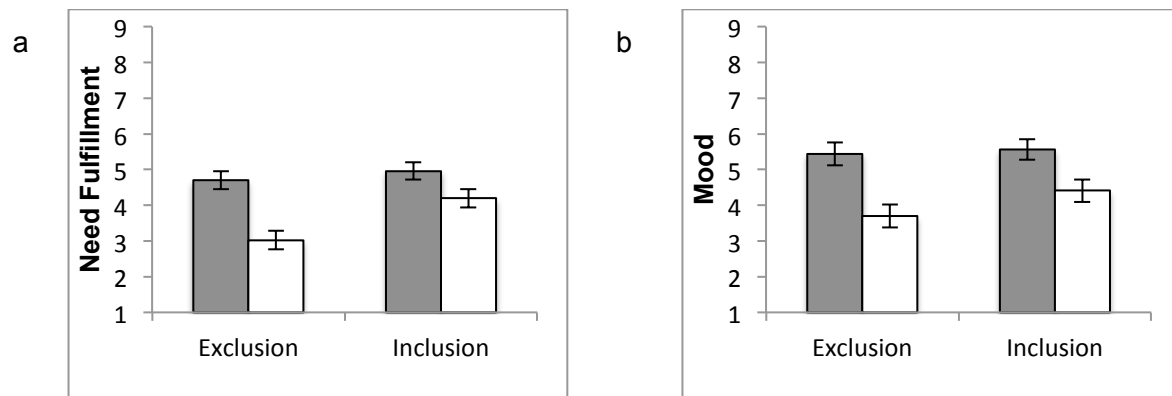


Figure 4 a and b. Mean levels of the dependent variables (with standard errors) as a function of the objective situation (exclusion; inclusion) in Study 4. Members of a left-wing political party are displayed as gray bars; members of a right-wing political party are displayed as white bars.

a: Need fulfillment. Higher values reflect more need fulfillment.

b: Mood. Higher values reflect more positive mood.