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On the Social Influence of Emotions in Groups: Interpersonal Effects of Anger and Happiness on Conformity Versus Deviance

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How do emotional expressions of group members shape conformity versus deviance in groups? We hypothesized that angry and happy responses to a group member's deviating opinion are interpreted as signals of imminent rejection versus acceptance. In 5 studies, the majority's expressions of anger led the deviant individual to feel rejected, whereas expressions of happiness made the deviant feel accepted. Because conformity can be seen as strategic behavior aimed at gaining (re)acceptance, the effects of emotional expressions on conformity should be moderated by social-contextual factors that determine the motivation to be accepted by the group and by the extent to which conformity is a means to this end. Accordingly, in Study 2, the availability of alternative groups determined whether a deviant conformed to the current group or abandoned the group after an angry reaction. In Study 3, anger and happiness were only associated with conformity pressure in situations that were perceived as cooperative (rather than competitive). Employing an interactive group task in Study 4, we showed that individuals who received an angry reaction contributed less in a cooperative group task than did those who received a neutral or happy reaction. Finally, in Study 5, peripheral group members conformed more after an angry reaction than after a happy reaction, but prototypical group members did not. Moreover, conformity was still manifest 3 weeks after the experiment, and this effect was mediated by feelings of rejection. We discuss implications of these findings for theorizing about social functions of emotions and the role of emotions in groups.

Keywords: conformity, deviance, social influence, emotions, interpersonal effects

At a conference, you and several colleagues decide to go out for dinner together. After some discussion, the group decides on finding a pizzeria. After wandering around fruitlessly for a while, you propose to change plans and go to a nearby Asian restaurant instead. Unexpectedly, your colleagues react as if annoyed—even a little angry. Does this negative emotional reaction of your colleagues lead you to abandon your new plan and conform to the rest of the group? Or do you decide to leave the group and go to a place that you like?

As this example illustrates, emotions are an integral part of group life. Many events that take place in or outside groups trigger emotions in group members by affecting individual or group-based concerns or goals (Smith, 1993)—such as finding a restaurant. Oftentimes, the emotions that are elicited in a group context do not

remain private. Rather, they tend to be expressed, deliberately or not, through facial displays, verbal expressions, bodily postures, and tone of voice (Ekman, 1982). Thus, when a group member elicits an emotion in other group members, the expression of this emotion may inform him or her about how others feel about the situation (Keltner & Haidt, 1999). Given how much time most of us spend in groups, it stands to reason that we be influenced by the emotions of our fellow group members. Surprisingly, however, past research has largely neglected the question of how an individual group member's behavior is influenced by the emotional expressions of other group members. In the present research, we examined one important manifestation of such social influence of emotions (van Kleef, van Doorn, Heerdink, & Koning, 2011), namely, the effects of a majority's emotional expressions on a deviant group member's behavior. In doing so, we focus on two emotions that have the potential to affect a group member who deviates from a consensually shared opinion or behavior in opposing ways: happiness and anger.

Emotions in Groups

Our theorizing is informed by a social-functional perspective on emotion. According to this perspective, emotions serve social functions in dyads, in groups, and between groups alike (e.g., Fischer & Manstead, 2008; Fridlund, 1994; Frijda & Mesquita, 1994; Keltner & Haidt, 1999; Parkinson, 1996; van Kleef, 2009). Emotions expressed by individuals or (factions within) groups may affect the behavior of other individuals or groups via affective processes (e.g., emotional contagion or liking; van Kleef, 2009) or through inferential processes, whereby individuals use others' emotional expressions to infer information about their motives and

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intentions (van Kleef, 2009; van Kleef, De Dreu, & Manstead, 2010).

Previous research on the functionality of emotions in groups has mainly been concerned with how affect spreads in groups, for instance via “primitive” emotional contagion (i.e., contagion via mimicry and afferent feedback; Hatfield, Cacioppo, & Rapson, 1994). Much research in this domain has focused on the interplay between individual-level and group-level affect (e.g., Barsade, 2002; Barsade & Gibson, 1998; Kelly & Barsade, 2001; Smith, 1993; Spoor & Kelly, 2004; Totterdell, 2000; Totterdell, Kellett, Teuchmann, & Briner, 1998; van Zomeren, Spears, Fischer, & Leach, 2004) and how group affect and affective variability within groups shape group outcomes (e.g., George, 1995; Tiedens, Sutton, & Fong, 2004). For instance, Barsade (2002) found that a confederate’s affective state influenced the mood of the other group members and that contagion of positive affect increased cooperation and group performance. Similarly, Sy, Côté, and Saavedra (2005) showed that teams with a leader who expressed positive affect developed a more positive “group affective tone” (George, 1995) and exhibited better coordination, whereas teams with a leader who expressed negative affect expended more effort on the task.

Focusing on the communicative aspects of emotion instead of how affect spreads within groups, another study showed that expressions of anger (as opposed to happiness) on the part of a leader can increase team performance when team members are motivated to consider the implications of the leader’s emotions. When such motivation was high, team members inferred from the leader’s anger that their performance was unsatisfactory, which led them to increase their efforts. The leader’s happiness, on the other hand, was interpreted as a sign that performance was satisfactory, and this inference led to a decrease in effort (van Kleef, Homan, Beersma, van Knippenberg, van Knippenberg, & Damen, 2009).

This brief overview of prior research on emotions in groups is far from comprehensive, but it suffices to demonstrate that emotional expressions of group members have the potential to influence the emotions, inferences, and behaviors of fellow group members. It also reveals that previous research has not considered the perspective of the individual within the group, and how other group members’ emotional expressions that are contingent on one group member’s behavior influence this individual. More specifically, we are interested in how deviant group members’ behavior is influenced by the majority’s emotional expressions in response to their behavior. Thus, we take a communicative approach to the interpersonal effects of emotions within groups to explain how happiness and anger, when expressed by a majority within a group, may influence a deviant individual’s tendency to persist in deviance or to yield to this majority by conforming. Before theorizing about the process underlying these effects, we first review literature on the role of deviance in group goal attainment, along with evidence regarding naturally occurring emotional responses to deviance.

Deviance and Group Goals

Although group members have a general tendency to maintain their similarity to others by conforming to the opinion and behavior of other group members (e.g., Asch, 1956), deviance is an integral part of group life (Griskevicius, Goldstein, Mortensen,

Cialdini, & Kenrick, 2006; Hayes, 2007; Hornsey & Jetten, 2004; Ridgeway, 1978). We define deviance broadly as any behavior or expression of an opinion or idea that is intentionally or unintentionally different from other group members’ behaviors or opinions. Thus, for instance, in the opening example, the suggestion to go to a nearby Asian restaurant could be construed as an act of deviance. Unintentional deviance is likely to surface frequently within groups, as an individual’s preferences, ideas, intentions, beliefs, and behavior are not necessarily in line with those of the group. In addition, group members may intentionally seek out different roles or diversifying positions to maintain a sense of uniqueness while still belonging to the group (Brewer, 1991; Homan, Greer, Jehn, & Koning, 2010; Hornsey & Jetten, 2004; Mullen & Hu, 1989).

In many situations, deviance is important for attaining group goals. These include situations that require creativity and divergent thinking to find the optimal solution to a problem (see, e.g., Kruglanski & Webster, 1991). Work on hidden profiles, diversity, groupthink, and the common knowledge effect show that group performance may indeed suffer when group members suppress deviance by being too critical of new information and converging too much (e.g., Gigone & Hastie, 1993; Janis, 1982; Stasser & Titus, 1985, 2003; van Knippenberg, De Dreu, & Homan, 2004). To avoid this situation, deviance is required. For instance, an expert individual may seek (minority) influence through deviance to change a group decision for the better (Moscovici, Mucchifaina, & Maass, 1994). Similarly, work on constructive conflict shows that deviance can indeed stimulate group performance (Amason, 1996; Jehn, 1995; Schweiger, Sandberg, & Ragan, 1986). Thus, because deviance can be crucial for obtaining good group outcomes, groups that are aware of the value of deviance may encourage it (for similar arguments, see de Wit, Greer, & Jehn, 2012; Kruglanski & Webster, 1991; Tjosvold, Wedley, & Field, 1986) and respond to it with happiness or enthusiasm.

On the other hand, deviance may constitute a threat to the group’s goals, because it violates the shared reality in the group, thereby endangering the harmony and trust in the group (Mannetti, Levine, Pierro, & Kruglanski, 2010; Marques, Abrams, Paez, & Martinez-Taboada, 1998; Sani, 2005). Furthermore, deviance threatens effective goal pursuit when coordinated action is required or when one course of action should be decided upon (Kruglanski & Webster, 1991). For instance, in the restaurant example, one person’s deviating dinner preference may undermine or slow down group decision making.

Indeed, in naturally occurring contexts, deviance is often severely socially sanctioned by passively (e.g., ignoring, ostracizing) or actively (e.g., rejecting, bullying, see Molden, Lucas, Gardner, Dean, & Knowles, 2009) excluding the deviant individual. People holding a deviant opinion may be metaphorically ostracized from their group by placing them outside what is an “acceptable” opinion for members of their group (Eidelman, Silvia, & Biernat, 2006; Marques et al., 1998; see also Williams, 2007). Group members may even be physically excluded from the group by voting them out (Schachter, 1951).

Deviance in groups usually does not lead to immediate social exclusion, however (Levine, 1989). Instead of ignoring and disengaging from a deviant group member, groups may attempt to resocialize the deviant member (Levin & Moreland, 1994; Moreland & Levine, 1989) by increasing their communication to the

deviant group member (Schachter, 1951). This increase in communication may be motivated by anger, as studies show that group members feel anger toward a deviant group member (e.g., Juvonen, 1992; Phillips, 2003; see also Festinger, 1950). Anecdotal reports indeed illustrate how the majority's reactions to deviance may escalate into strong hostility and aggression. For instance, Nemeth (2010) described the reactions of naive subjects in the group to a confederate advocating a deviant position in her Nemeth and Wachtler (1974, p. 10) study: "The case was hypothetical—but the anger was so evident that subjects were pounding their fists on the table next to the confederate's face (the one who argued a minority position on compensation)." Thus, attempts to force a deviant individual to conform may be accompanied by expressions of anger.

In short, depending on the context and the situation the group is facing, deviance may be welcomed or not. To effectively pursue group goals, groups therefore need to be able to regulate deviance. We argue that the majority's expressions of anger and happiness in response to deviance can be functional in this respect, as happiness may incite further deviance, and anger may motivate the individual to conform.

Anger, Happiness, and Inclusionary Status

We propose that deviant individuals interpret the majority's emotional reaction to their behavior to estimate their position in the group, which may motivate them to change their behavior. More specifically, we argue that happiness and anger, if expressed toward a deviant individual in a group, may be interpreted as information about the deviant individual's inclusionary status. In other words, these emotional expressions influence the degree to which a deviant feels accepted or rejected by the group.

Happiness is elicited by events that an individual perceives as goal congruent (Lazarus, 1991). In a dyadic context, expressions of happiness are interpreted as a signal that the environment is safe (Klannert, Emde, Butterfield, & Campos, 1986; Sorce, Emde, Campos, & Klannert, 1985) and expressing happiness (i.e., smiling) is considered a strategy for affiliation (Clark, Pataki, & Carver, 1996; Fridlund, 1991, 1994; Kraut & Johnston, 1979). Indeed, positive emotions such as happiness serve affiliative functions (van Kleef, De Dreu & Manstead, 2010), as they help build social relationships when shared (Fredrickson, 1998, 2001). Similarly, in the group context, positive affect is linked to the development of trust and harmonious intragroup relations (e.g., Walter & Bruch, 2008). Thus, happiness may implicate that one's belonging in the group is secure. We therefore expected to find that a deviant individual would feel relatively accepted if the majority responds with happiness to his or her deviance.

Anger, on the other hand, is often expressed in an attempt to get other people to change their behavior (cf. Averill, 1982; Clark et al., 1996; Fischer & Manstead, 2008; Fischer & Roseman, 2007), which implies that one's opinion or behavior is currently unacceptable to the expressers (Fischer & Manstead, 2008). In a group setting, expressions of anger may therefore draw attention to the social distance between the deviant and the rest of the group. Furthermore, the evidence discussed suggests that expressions of anger precede or accompany social exclusion in groups. Given that humans are highly sensitive to the safety of their belonging in groups (Baumeister & Leary, 1995; Kerr & Levine, 2008; Smart

Richman & Leary, 2009; Williams, 2007; Williams, Cheung, & Choi, 2000), the majority's expressions of anger may therefore create the perception that one's belonging in the group is under threat. Hence, we predicted that a majority's expression of anger would cause the deviant individual to feel rejected by the group.

Conformity in Response to the Majority's Emotional Expressions

By affecting the extent to which a deviant individual feels accepted or rejected, the majority's emotional reaction may allow the deviant individual to remain deviant or motivate the individual to conform. When the majority expresses happiness in response to deviance, and the deviant individual feels accepted in turn, the deviant is not likely to change his or her behavior and can therefore be expected to persist in deviance. In the case of an angry reaction, however, the deviant will feel rejected, and the deviant will therefore be motivated to restore the sense of belonging. One way to do restore this sense is by conforming to the majority's position.

Conformity can be defined as the act of adjusting one's overt behavior in such a way that it becomes more in line with the apparent group norm (for a similar definition, see Nail, MacDonald, & Levy, 2000). Although conformity may be attributed to various motives (e.g., Cialdini & Goldstein, 2004; Deutsch & Gerard, 1955), the resulting overt behavior is similar: Conformity involves movement toward the group norm. From the group's point of view, the most important consequence of behavioral conformity is that a deviant's challenge to the group's position is removed. Thus, by conforming, a person can show a commitment to the group's identity (i.e., identity performance; Klein, Spears, & Reicher, 2007) and group goals, which may increase acceptance from the group (cf. Hollander, 1960; Levine & Moreland, 1994; Moreland & Levine, 1989). Conformity can therefore be seen as strategic behavior aimed at gaining acceptance in a group. This idea is illustrated by prior research. For instance, Asch (1956), in an experiment in which participants had to choose which of three lines was the shortest, showed that even if people are really certain of their own judgment, they conform to the clearly erroneous opinion of a majority. Similarly, in her theory of the spiral of silence, Noelle-Neumann (1974, p. 43) observed that "to the individual, not isolating himself is more important than his own judgment." This may lead individuals holding deviant opinions to be reluctant to speak out in anticipation of negative reactions (i.e., conformity by omission; Cialdini & Trost, 1998).

Several studies have suggested that conformity is especially likely if an individual feels motivated to seek acceptance from a group and if conformity can be observed by this group. For instance, Dittes and Kelley (1956) showed that participants who felt rejected by their group publicly conformed more to the judgments of their groups than did participants who felt less rejected. In another study, peripheral group members (who experienced insecure status within their group) strategically exhibited greater conformity when their responses were made public to an ingroup audience than when their responses remained private (Jetten, Hornsey, & Adarves-Yorno, 2006). Similarly, DeWall (2010) showed that people who were led to expect that they would have a lonely future (Twenge, Catanese, & Baumeister, 2003) changed their attitudes to be congruent with the opinions of their peers (see also Lakin & Chartrand, 2003). Thus, conformity is likely if a

person feels rejected, is motivated to seek acceptance in a given group, and if conformity is likely to elicit acceptance because it will be both perceived and appreciated by the group.

The Present Research

The theoretical model guiding this research is depicted in Figure 1. The first path in the model represents our hypothesis that a deviant individual would feel rejected if the majority expresses anger about his or her deviance, whereas the deviant individual would feel accepted if the majority expresses happiness. The second path shows how this subjective sense of acceptance or rejection, in turn, affects the behavior of the deviant individual. We expected that a happy reaction would not motivate behavioral change or would elicit further deviance, as it makes the deviant feel that his or her deviant behavior is acceptable. Feeling rejected after an angry reaction, on the other hand, might motivate the individual to seek ways to restore the sense of belonging. In light of the view of conformity as strategic behavior aimed at gaining acceptance in a group (e.g., Asch, 1956; Noelle-Neumann, 1974), we proposed that whether a deviant individual conforms to the majority position after an angry reaction from the group depends on the extent to which (a) the deviant is motivated to (re)gain acceptance in the group, and (b) conformity is a possible means to this end. We examined these ideas in five studies.

In Study 1, we tested the basic idea that emotional expressions are interpreted as signals of an individual's inclusionary status using a vignette approach. Then, we tested the influence of the motive to be reaccepted by manipulating the availability of alternative groups in another vignette study, Study 2. Next, we used a critical incidents paradigm to test whether happiness and anger are associated with differences in the perceived pressure to conform and whether this association is affected by the extent to which the situation is perceived as cooperative or competitive, as this determines whether conformity is an effective means to gain acceptance. We also tested if felt acceptance or rejection could account for this association (Study 3). In Study 4, we extended and replicated these findings in a cooperative group task involving real interaction and a behavioral outcome measure. Finally, we tested the influence of the extent to which one's status as a group member is secure, as another factor determining the motive to be reaccepted, using a simulated group interaction, and we tested whether emotional expressions produce conformity that lasts over time (Study 5). The specific hypotheses concerning these moderators will be developed in the introductions to the respective studies.

On a statistical note, we use variants of regression analysis (in the statistical computing software R Version 2.15.1; R Core Team, 2012) for all of our analyses. There are two reasons for this choice. First, regression analysis can accommodate both dichotomous (Studies 2 and 5) and continuous (Studies 1, 3, 4, and 5) dependent variables and allowed us to do multilevel analysis (Study 4), thereby providing statistical consistency across studies. Second, regression coefficients were necessary for conducting the (moderated) mediation analyses that were required to test our theoretical model (Preacher, Rucker, & Hayes, 2007). By focusing on regression output from the outset, we avoid reporting redundant statistical analyses. To facilitate interpretation, we also reported means and standard deviations wherever comparisons between groups are made. Finally, with regards to hypothesis testing, we used one-

tailed tests to test directional hypotheses and two-tailed tests in all other cases. Whenever a one-tailed test is used, we noted it explicitly in the text.

Study 1

In Study 1, our aim was to establish the hypothesized relation between majority emotions and felt acceptance and rejection by a deviant group member. Participants imagined themselves in a group in which a majority reacted with anger, happiness, disappointment, or no emotion to their own deviant opinion. We measured the extent to which participants would feel accepted or rejected from the group as a result of this emotional expression. We expected that participants would report feeling more rejected after an angry reaction than after a neutral reaction, whereas participants were expected to feel more accepted after a happy reaction than after a neutral reaction. We included the disappointment condition to rule out the possibility that any effects of majority anger on feeling rejected could be attributed to the reaction being generally negative in nature, and we expected participants to feel less rejected after a disappointed reaction than after an angry reaction.

Method

Participants and design. One hundred and fifteen individuals (26 men, 88 women, one individual missing demographic information, $M_{\text{age}} = 21.03$, range 17–54 years)¹ took part in the experiment, which was part of a test battery in which first-year psychology students participated to fulfill a course requirement. Participants were randomly assigned to receive one of four emotional reactions from the majority: anger, happiness, disappointment, or neutral (i.e., no emotion).

Materials and procedure.

Vignette. Participants first read a short vignette that described a group situation in which the majority's emotion was manipulated. The protagonist (same sex as the participant) had come together with three same-sex friends to discuss and decide on their vacation destination. All three friends shared a preference for one destination, while the protagonist had picked a different destination. Thus, the situation resembled a standard conformity paradigm (e.g., Asch, 1956) with a majority of modal size (Bond, 2005). The story ended with "When it's your turn, you tell the others where you'd like to go. Your friends don't immediately agree with you . . ." followed by ". . . and react with anger" (anger condition), ". . . but react with enthusiasm" (happiness condition), ". . . and react with disappointment" (disappointment condition), or ". . . and react neutral" (control condition). We used the word *enthusiasm* (*enthousiasme* in Dutch) instead of *happiness* (*blij*) because it was more ecologically valid in this situation. Although enthusiasm may imply slightly more arousal than happiness according to intrapersonal affect circumplex models (e.g., Russell & Barrett,

¹ In all experiments reported in this article, we checked whether the genders were balanced over condition as a precondition to running our analyses. Although the low number of males in all studies did not permit us to conduct analyses using participant gender reliably, explorative inclusion of this factor in the discussed models revealed only isolated indications of effects of participant gender, none of which challenged our main conclusions. We therefore do not discuss this variable in any of our studies.

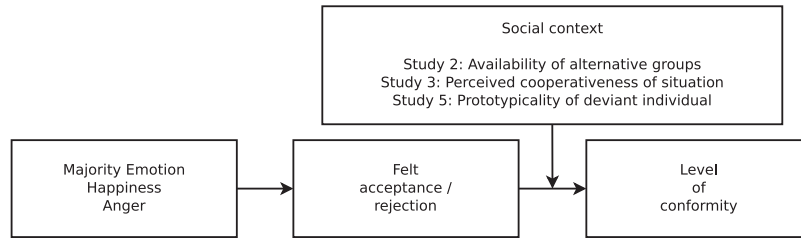


Figure 1. General theoretical model.

1999), they can be grouped into the same affiliative family of emotions based on their comparable interpersonal effects (van Kleef, De Dreu & Manstead, 2010; we return to this issue in the General Discussion).

Acceptance/rejection scale. After participants had imagined themselves in the situation, we measured the extent to which they felt accepted or rejected using a four-item scale that was similar to other scales developed for this purpose (e.g., Wesselman, Butler, Williams, & Pickett, 2010; Williams et al., 2000; Williams & Sommer, 1997). The items were as follows: “Due to the group’s reaction, I feel rejected,” “The group’s reaction makes me feel alone against the rest,” “The group’s reaction makes me feel accepted,” and “Due to the group’s reaction, I feel supported” (the latter two items being reverse-scored). Items were answered on a 7-point scale (ranging from 1 = *not at all* to 7 = *very much*). Reflecting our bipolar conceptualization of this dimension, scores above the midpoint of the scale (4) indicate rejection and scores below the midpoint of the scale indicate acceptance. A principal factor analysis confirmed the unidimensionality of the scale (all factor loadings on the first factor above .69) and the reliability of the scale was good (Cronbach’s $\alpha = .84$). The aggregate score was calculated by averaging the items.

Manipulation checks. To check whether the manipulation of majority emotion had been successful, at the end of the experiment, participants indicated to what extent the group had reacted with enthusiasm, anger, and disappointment to their proposal (from 1 = *not at all* to 7 = *very much*).

Results

Manipulation check. Manipulation checks confirmed that the majority reaction was perceived as more angry when it had been described as angry ($M = 5.48$, $SD = 1.96$) compared with when it had been described as neutral ($M = 2.60$, $SD = 1.48$, $\beta = -1.39$), enthusiastic ($M = 1.90$, $SD = 1.21$, $\beta = -1.73$), or disappointed ($M = 2.77$, $SD = 1.50$, $\beta = -1.31$), all t s > 6.4 , all p s $< .001$ (1-tailed). Similarly, the majority reaction was perceived as more enthusiastic when it had been described as enthusiastic ($M = 5.53$, $SD = 1.59$) than when it had been described as neutral ($M = 2.73$, $SD = 1.57$, $\beta = -1.41$), angry ($M = 2.34$, $SD = 1.56$, $\beta = -1.61$), or disappointed ($M = 2.50$, $SD = 1.10$, $\beta = -1.53$), all t s > 7.3 , p s $< .001$ (one-tailed). Finally, the majority reaction was perceived as more disappointed when it had been described as disappointed ($M = 4.92$, $SD = 2.15$) compared with when it had been described as neutral ($M = 2.60$, $SD = 1.45$, $\beta = -1.20$), enthusiastic ($M = 2.17$, $SD = 1.49$, $\beta = -1.43$), or angry ($M = 3.31$, $SD = 1.49$, $\beta = -0.84$), all t s > 3.6 , p s $< .001$ (one-tailed). Hence, the manipulation was successful.

Acceptance/rejection. To test whether the majority emotion had affected the extent to which participants felt accepted or rejected, we tested the effects of the emotion manipulations against the neutral control condition. As expected, after an angry reaction, participants reported feeling more rejected ($M = 4.65$, $SD = 1.14$) than after a neutral reaction ($M = 3.84$, $SD = 1.04$), $\beta = 0.66$, $t = 2.95$, $p = .002$ (one-tailed). Also as predicted, after an enthusiastic reaction, participants felt less rejected (i.e., more accepted, $M = 2.91$, $SD = 1.03$), $\beta = -0.77$, $t = -3.45$, $p < .001$ (one-tailed) than after a neutral reaction. Finally, a disappointed reaction ($M = 4.06$, $SD = 0.95$) did not arouse stronger feelings of rejection than a neutral reaction, $\beta = 0.18$, $t = 0.77$, $p = .44$. Additional independent t tests revealed that, as expected, participants in the disappointed condition reported feeling less rejected than participants in the angry condition, $t(53) = -2.06$, $p = .02$ (one-tailed). They also felt more rejected than participants in the happy condition, $t(54) = 4.31$, $p < .001$.

Discussion

In Study 1, we showed that in a situation in which one disagrees with the majority, one feels less accepted (i.e., more rejected) if the majority expresses anger, whereas one feels more accepted if the majority expresses happiness. Furthermore, the finding that one does not feel more rejected if the majority expresses disappointment compared with a neutral reaction, and feels less rejected after a disappointed reaction compared with an angry reaction, suggests that not all negative emotional reactions lead to feelings of rejection. These findings support the basic assumption underlying the present research, namely, that happiness and anger are signals of one’s inclusionary status. Now that this basic effect is established, the question is how expressions of anger versus happiness influence the deviant individual’s behavior.

Study 2

Being rejected is a painful experience, which may fuel two very different behavioral tendencies. On the one hand, feelings of rejection may inspire negative views of the group, undermine identification, and lead people to leave their group (Williams, 2007; see also Levine & Moreland, 1994; Moreland & Levine, 1989). On the other hand, being rejected also constitutes a threat to the sense of belonging (Baumeister & Leary, 1995), which motivates people to look for ways to restore belonging (Maner, DeWall, Baumeister, & Schaller, 2007), for instance by conforming to the majority position. Whether people leave the group or conform to the group in such cases likely depends on whether membership in an alternative group is readily available. Consistent

with the idea that feeling rejected can prompt people to seek belonging in a different group, Williams et al. (2000) showed that people, after having been ignored by two other participants in a virtual ball-throwing game, conformed more to the unanimously incorrect decisions of an alternative group. Yet, if there is no viable alternative to the current group, we predicted that people would feel pressured to conform to their *current* group, as there is no other way to restore their sense of belonging.

Based on these considerations, in Study 2 we aimed to investigate whether emotions expressed by a majority influence the choice between conforming to the current group and leaving the group. For this purpose, the scenario from Study 1 was modified to manipulate the availability of alternative groups in addition to the emotion expressed by the majority. We hypothesized that this choice would depend on the availability of alternatives: If alternatives are available, the likelihood of exiting the group should be higher for people who receive an angry reaction (and therefore feel rejected) than for people who receive a happy reaction (and therefore feel accepted). When no alternatives are available, people should choose to remain in the group, regardless of whether they feel rejected. A further aim was to find out whether any influence of perceived majority emotions on behavior would be mediated by felt acceptance and rejection.

Method

Participants. Seventy-three participants (18 men, $M_{\text{age}} = 21.04$, range 18–44 years) were recruited for the experiment in exchange for 7 euro or partial course credits. Participants were randomly assigned to one of the conditions of a 2 (alternatives available: yes or no) \times 2 (majority emotion: anger or happiness) between-subjects design.

Materials and procedure.

Vignette. The vignette was adapted from the one used in Study 1. In this version, the introduction explained that the protagonist had just started studying in a different city, where he or she hardly knew anyone. We manipulated the availability of alternatives by then including in the story either the statement “You hardly know anyone in your new study group, and you haven’t met any fellow students that you like so much that you’d like to go on vacation with them” (no alternatives condition) or the statement “You have met some fellow students whom you like, and when you were recently discussing vacations, you had the impression that everyone would be interested in going on vacation together” (alternatives condition). The story then continued as in Study 1.

Acceptance/rejection scale. We used the same four-item scale as in Study 1 (Cronbach’s $\alpha = .89$).

Conforming versus leaving the group. Participants were asked to choose between two alternatives: (a) conforming to the group, while abandoning one’s own destination (“Abide by the majority”), or (b) attempting to find other people to go on vacation with (“Go on vacation with others”). These options were presented as two buttons on the screen, forcing a choice between these alternatives.

Manipulation checks. The manipulation of the availability of alternatives was checked with three items (e.g., “Except for my friends from high school, there is nobody I could go on vacation with,” rated from 1 = *strongly disagree* to 7 = *strongly agree*; Cronbach’s $\alpha = .82$). Two more items checked to which extent the

group had reacted with happiness and anger to their proposal (rated from 1 = *not at all* to 7 = *very much*).

Results

Manipulation checks. As intended, participants reported having received a more angry reaction when the reaction had been described as angry ($M = 5.50$, $SD = 1.31$) compared with when it had been described as happy ($M = 2.15$, $SD = 1.31$), $\beta = 0.73$, $t(71) = 9.12$, $R^2 = .54$, $p < .001$ (one-tailed). Similarly, participants indicated that the reaction had been more happy after the reaction had been described as happy ($M = 4.44$, $SD = 1.17$) as opposed to angry ($M = 1.94$, $SD = 1.04$), $\beta = 0.75$, $t(71) = 9.58$, $R^2 = .56$, $p < .001$ (one-tailed). Finally, participants indicated that there were more alternative groups that they could go on vacation with in the alternatives condition ($M = 5.98$, $SD = 0.76$) than in the no alternatives condition ($M = 4.30$, $SD = 1.73$), $\beta = 1.06$, $t(71) = 5.30$, $R^2 = .28$, $p < .001$ (one-tailed). None of the manipulations affected the check for the other manipulation, and no interactions were found on any of the manipulation checks. Thus, the manipulations were successful.

Acceptance/rejection. As in Study 1, participants felt more rejected after the majority had expressed anger ($M = 4.99$, $SD = 1.02$) than after the majority had expressed happiness ($M = 2.85$, $SD = 1.01$), $\beta = 0.73$, $t(71) = 8.99$, $R^2 = .53$, $p < .001$ (one-tailed). There were no main or interaction effects involving alternatives.

Conforming versus leaving the group. As can be seen from Figure 2, the choice between conforming to the group or leaving the group depended on both the availability of alternatives and the emotion expressed by the majority. Using probit regression,² the choice between conforming and leaving the group was regressed on the manipulations. As expected, the interaction was significant, $B = -1.76$, Wald’s $z = -2.68$, $p = .004$ (one-tailed). To interpret this interaction, we calculated simple slopes of the majority emotion manipulation within the alternatives and no alternatives conditions (Aiken, West, & Reno, 1991). As expected, if an alternative group was available, fewer participants chose conformity after an angry reaction (six out of 16, or 37.50%) than after a happy reaction (16 out of 19, or 84.21%), $B = 1.32$, Wald’s $z = 2.80$, $p = .003$ (one-tailed). When no alternative group was available, the emotions expressed by the majority did not affect the choice between conformity and leaving the group (anger: 15 out of 18, or 83.33%; happiness: 14 out of 20, or 70.00%), $B = -0.44$, Wald’s $z = -0.97$, $p = .33$. Thus, when no alternatives were available, participants generally preferred staying in the group even if that meant yielding to the majority’s position, but when alternatives were available, anger expressed by a majority increased the chance that participants would prefer to leave the group.

Mediation analysis. To investigate whether feeling rejected after an angry reaction could explain the choice between conforming and leaving the group, depending on the availability of alternatives, we conducted a moderated mediation analysis (Preacher et al., 2007). A moderated mediation analysis estimates the strength of the indirect effect of an independent variable on a dependent

² With the logit instead of the probit link function used for these analyses, the reported p values are virtually identical (deviations in the .005–.01 range in both directions). The interpretation does not change.

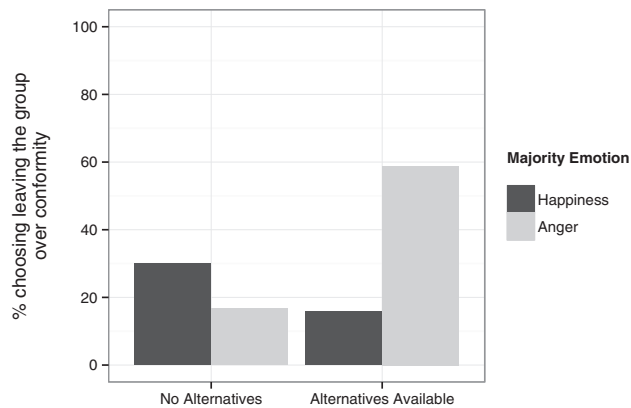


Figure 2. Proportion of participants choosing leaving the group over conforming (Study 2).

variable through a mediator separately at different values of the moderator. The choice between conforming (0) or leaving the group (a) was the dependent variable and was specified so that higher coefficients of the predictor variables indicate a higher likelihood of leaving the group relative to conforming.³ The emotion manipulation served as the independent variable, perceived rejection as the mediator, and we used availability of alternatives as the moderator of the path from feeling rejected to the choice between conforming or leaving the group (see Figure 1 for the general model that was tested). The significance of the indirect effects was determined by bootstrapping (10,000 resamples in total). Calculating a coefficient estimate based on the likelihood of one response category over another in case one of the cells in the design is empty is, in effect, a division by zero, which yields coefficient estimates that approach infinity. As such estimates are obviously incorrect, resamples of the data set with empty cells were dropped from the distribution of indirect effects. The estimates are therefore based on the remaining resamples ($R = 9,067$). In this and all remaining mediation analyses, both 95% bias-corrected and accelerated (BC_a ; Efron, 1987) confidence intervals and nonparametric p values are reported. These p values are based on the proportion of the distribution of indirect effects on either side of 0 (indicating no mediation) and are therefore uncorrected.

The results of the analysis indicated moderated mediation. When no alternatives were available, 0 was enclosed in the confidence interval of the indirect effect, indicating that any effects of the majority emotion manipulation on the choice between conforming and leaving the group were not mediated by felt acceptance/rejection, $\beta = -0.21$, 95% BC_a confidence interval (CI) $[-1.27, 0.81]$, $p = .74$ (one-tailed). When alternatives were available, however, 0 fell outside the confidence interval of the indirect effect, indicating that the choice between conforming and leaving the group was mediated by feeling accepted versus rejected due to the majority's emotions, $\beta = 1.09$, 95% BC_a CI: [lower limit: 0.31],⁴ $p = .002$ (one-tailed). It can be concluded that although all participants felt more rejected after an angry reaction, this only led them to leave the group if an alternative group was available. When no alternatives were available, feeling rejected did not affect the choice between conforming and leaving the group.

Discussion

In this study, we replicated the finding that a deviant who receives an angry reaction from a majority feels more rejected than a deviant individual who receives a happy reaction. Furthermore, we showed that the availability of alternatives determines whether this person stays in the group or leaves after receiving an angry reaction. When no alternatives to the current group are available, showing good group membership by conforming is the likely option as this helps resolve the threat to belonging when experiencing feelings of rejection. If membership in an alternative group is available, the deviant is likely to leave the group after an angry reaction. Happiness, on the other hand, leads to feeling accepted, which appears to keep people committed to the group.

After a happy reaction, participants in this study almost invariably chose conformity over leaving the group. As conformity was contrasted with leaving the group, the preference for conformity after a happy reaction may reflect a heightened desire to remain in the group, rather than a desire to regain acceptance. Based on this research, we cannot determine which of these explanations can account for the behavior of participants who received a happy reaction. Therefore, in the last three studies, we employed measures of conformity that were independent of the choice between staying in the group or not. Additionally, we switched to different paradigms to overcome the limitations of the vignette paradigm, which taps into naïve theories about the effects of emotions (cf. Parkinson & Manstead, 1993) and may therefore produce slightly different results than actual reactions to emotions that surface in reaction to deviance in groups. Thus, in the last three experiments, we used more realistic settings to test how a majority's angry and happy reactions to deviance shape conformity.

Study 3

In this study, we investigated in which situations the majority's emotional expressions can pressure deviant individuals to conform by inducing feelings of acceptance versus rejection. As argued in the Introduction, whether feeling rejected leads to conformity critically depends on the extent to which conformity is a meaningful way of showing that one is a good group member. In cooperative settings, coordinated action is required for groups to achieve their shared goals, and deviance may threaten effective goal pursuit. This implies that especially in cooperative settings, good group membership may be communicated by showing commitment to the group's goals and a willingness to conform to further the group's interests (Cialdini & Trost, 1998; Dirks, 1999; Mayer, Davis, & Schoorman, 1995). In line with this reasoning, previous research has indicated that conformity is indeed more likely to the extent that (positive) interdependency (i.e., cooperativeness) is perceived among the group members (Berkowitz, 1957). We therefore proposed that feeling rejected makes people

³ For this analysis, R was programmed according to Preacher et al.'s (2007) recommendations and checked in personal communication with Andrew F. Hayes (May 2011).

⁴ This notation indicates a one-sided confidence interval that is used to test a directional hypothesis. The notation [lower limit: X] indicates that there is a 95% confidence that the test statistic falls between X and positive infinity. If the hypothesis predicts a positive relation, and X is greater than zero, the hypothesis is supported.

conform in situations they perceive as cooperative, but not in situations that are perceived as competitive. We expected that when a deviant individual perceived the situation as cooperative, this person would feel pressure to conform in case the majority reacts with anger to their deviance. In competitive settings, on the other hand, an individual cannot show commitment to a group goal by conforming, as there are conflicting goals in the group. The majority's anger may even signal that the individual is reaching his or her goals at the expense of the pursuit of other people's goals (Lanzetta & Englis, 1989), which may motivate him or her to stay the course. Thus, we expected that a deviant individual would be less likely to feel the pressure to conform if the majority responded with anger in a situation that this person perceived as competitive.

We investigated the role of the perceived cooperativeness of the situation by asking participants to recall a situation in which their opinion had differed from that of other group members. They were then asked to report the emotions expressed by the majority and to reflect on the type of situation in terms of cooperation/competition. Conformity was measured by asking people to which extent they experienced a pressure to conform in the situation. We preferred this measure over asking participants whether they actually conformed, because people are generally reluctant to overtly admit their conformity to a group. For instance, Asch's (1956) participants blamed their conformity on their own vision, rather than on the group pressure experienced during the experiment. Furthermore, there is evidence that people distort their memories of an act of conformity to make it appear as though they initially agreed (Griffin & Buehler, 1993). We assumed that this pressure to conform would reflect the subjective experience of threat or anxiety (Berns, Capra, Moore, & Noussair, 2010) that is ultimately resolved by conforming to the group and that it would therefore be a good proxy of conformity in the situation. Finally, we tested whether any effects of majority emotions on conformity pressure were mediated by perceived rejection.

Method

Participants. Sixty-eight participants were recruited for a study on disagreement in groups. Four participants indicated that they were unable to recall and describe an incident in which their opinion had differed from a group's consensus, and their data could therefore not be used. The final sample consisted of 18 male and 46 female participants ($M_{\text{age}} = 22.11$, range 18–50 years). They were compensated with course credits or 7 euro.

Materials and procedure.

Critical incident prompt. Upon arriving in the laboratory, participants were seated individually behind a computer, which was used for presenting all instructions and recording answers. After completing a number of unrelated personality measures, the critical incident prompt was displayed on screen. Participants were asked to recall an episode in which a group decision had to be made, and their opinion had differed from that of the group. They were asked to describe as many details of the situation as they could.

Acceptance/rejection. After participants had described the situation, the experiment continued with the display of a prompt asking the participant to indicate on a bipolar 7-point scale (from 1 = *rejected* to 7 = *accepted*) how they had felt in the situation

they just described. The scale was reversed for use in the analyses, such that higher scores indicate stronger feelings of rejection.

Majority emotions. The emotions expressed by the majority were measured using a list of 26 affective states.⁵ The items were presented in random order, and the participant was asked to indicate on 7-point scales (from 1 = *not at all* to 7 = *very much*) how much of the respective emotion had been shown by the majority. An initial attempt to reduce the number of emotions measured by this questionnaire using principal factor analysis showed that the factor structure was highly dependent on which items were included in the analysis. Therefore, we restricted our analysis to the six items related to happiness and anger, which were two clusters that emerged consistently in all factor analyses. Both the point of inflexion in the scree plot and Kaiser's criterion agreed on two as the optimal number of factors. Focusing on these two factors, maximum likelihood factor analysis using varimax rotation resulted in a clear distinction between *enthusiasm*, *happiness*, *contentment*, and amusement on the one hand and *anger* and *irritation* on the other (see Table 1). The first factor was labeled as happiness (Cronbach's $\alpha = .83$), and the second as anger ($r = .70$, $p < .001$). The emotion clusters were aggregated by averaging.

Cooperativeness. Perceived cooperativeness of the situation was measured using three items. Two of these items ("To what extent did you pursue personal goals that differed from the group's goals," and "To what extent did your goals conflict with the group's goals," both reverse coded) asked about the goal structure without directly referring to cooperation and competition and were answered on 7-point scales (from 1 = *not at all* to 7 = *very much*). A third item directly asked how cooperative or competitive the situation had been on a bipolar 5-point scale (1 = *competitive*, 3 = *neutral*, and 5 = *cooperative*). The scale composed of these items was internally consistent (Cronbach's $\alpha = .68$), and the average of these items was calculated after z -transforming the individual items to correct for the different response scales.

Conformity pressure. At the end of the experiment, we asked participants to what extent they had felt pressure to change their opinion or behavior in line with the group (from 1 = *none at all* to 7 = *very much*).

Results

Only four of the 68 participants were unable to recall an instance in which their opinion had differed from the majority's, which suggests that the kind of situation under investigation is quite common. We found that a broad variety of situations was reported. Overall, many situations resembled the situation that we described in the vignettes used in Studies 1 and 2. To give an impression of the kind of stories that our participants wrote, we give two examples here:

We wanted to buy a car to go on vacation with. I wanted a somewhat more expensive car, so we could sell it for more or less the same value after our vacation. I also liked the luxury and comfort of a better car. And the risk of a car breakdown would be smaller as well. The others wanted a cheap car though, so we wouldn't have to worry about

⁵ The full list is jealousy, disappointment, shock, suspicion, disgust, tense, anger, boredom, contempt, sorry, guilt, nervousness, enthusiasm, happiness, surprise, compassion, relaxation, contentment, fear, relief, irritation, shame, amusement, schadenfreude, indifference, and interest.

Table 1
Factor Loadings of Reported Majority Emotions on Two Principal Factors After Varimax Rotation (Study 3)

Emotion	Happiness	Anger
Happy	.79	
Content	.79	
Enthusiastic	.73	
Amused	.63	
Irritated		.91
Anger		.75

keeping it neat and would maybe be able to keep it. We had quite some discussion, and finally we decided to go for the cheaper car, so that's the one we have now. All of us, including myself, are pleased with it.

Quite a few situations were much less cooperative and friendly, as this story shows:

When I was in high school, we had to do a scientific project in groups of four students. I was in a group with three of my friends, and we were talking about the topic for our project. I didn't find the topics they proposed very interesting. I really wanted a topic that I found interesting and that I could find out more about. So when I proposed my topic (something related to parapsychology), they just laughed at me. Then, I tried to persist because I wanted to show them it is not such a stupid topic. They really didn't want my topic, and I didn't really want theirs . . . In the end, one of the other group members agreed with me, and the group split. Even outside class, we got into arguments about nothing. I was angry about their reaction, and I found them childish. In the end, the subgroups worked almost in isolation on two topics that were only minimally related.

Acceptance/rejection. The extent to which participants felt rejected was predicted by anger and happiness both separately and simultaneously. When acceptance/rejection was regressed on both emotions simultaneously, the results indicated that, as expected, the more the majority reaction had been angry, the more participants felt rejected, $\beta = 0.47$, $t(61) = 4.32$, $R_p^2 = .23$, $p < .001$ (one-tailed). Also as expected, the happier the reaction from the majority had been, the less participants had felt rejected (i.e., more accepted), $\beta = -0.20$, $t(61) = -1.86$, $R_p^2 = .07$, $p = .03$ (one-tailed). No interactions with the cooperativeness of the situation were found, $|t|s < .58$, $ps > .55$.

Conformity pressure. As expected, the relation between majority emotions and conformity pressure depended on the perceived cooperativeness of the situation. When conformity pressure was regressed on the interactions between majority emotions and the perceived cooperativeness of the situation, both the Anger \times Cooperativeness, $\beta = -0.35$, $t(58) = -1.82$, $p = .04$, one-tailed, and the Happiness \times Cooperativeness, $\beta = 0.32$, $t(58) = 1.97$, $p = .03$, one-tailed, interactions emerged as significant predictors. In cooperative settings (+1 SD), perceived conformity pressure increased as the amount of anger expressed by the majority increased, simple effect: $\beta = 0.51$, $t(58) = 2.03$, $p = .02$, one-tailed, and the amount of happiness expressed by the majority decreased, simple effect: $\beta = -0.40$, $t(58) = -1.89$, $p = .03$, one-tailed. In competitive settings (-1 SD), no relation between majority emotions and perceived conformity pressure was found, simple effect

anger: $\beta = -0.19$, $t(58) = -0.85$, $p = .40$; and simple effect happiness: $\beta = 0.24$, $t(58) = 1.19$, $p = .24$.

The independent measurement of anger and happiness allowed us to interpret the effects of both emotions jointly. Summarizing the previously described information, conformity pressure was highest in cooperative situations in which the majority expressed anger and little happiness, and the least conformity pressure was found in cooperative settings in which the majority expressed happiness and little anger (see Figure 3). Conformity pressure in situations perceived as competitive and in situations in which both emotions were equally present was at intermediate levels. Thus, consistent with the hypotheses, it is in situations perceived as cooperative that more anger is associated with more conformity pressure, and more happiness is associated with less conformity pressure.

Mediation analysis. To find out whether felt rejection could account for the relation between majority emotions and conformity pressure in situations perceived as cooperative, we conducted a moderated mediation analysis (Preacher et al., 2007; see also Study 2). The indirect effects of majority emotions on conformity pressure through acceptance/rejection were estimated separately for anger and happiness. The perceived cooperativeness of the situation was tested as the moderator of the path between acceptance/rejection and conformity pressure (see Figure 1 for the general model). Because the cooperativeness of the situation was a continuous variable, we adopted an approach similar to simple slope analysis (Aiken et al., 1991). We calculated BC_a confidence intervals after bootstrapping ($R = 10,000$) at moderator values one standard deviation above and below the mean. These values thus reflected relatively cooperative and competitive situations, respectively. Our hypothesis that felt acceptance/rejection would mediate the path from majority emotions to conformity pressure in situations seen as cooperative was supported for both anger, $B = 0.19$, 95% BC_a CI [lower limit: 0.08], $p = .002$, one-tailed, and happiness, $B = -0.17$, 95% BC_a CI [upper limit: -0.04], $p = .008$, one-tailed. In situations seen as more competitive, neither the effect of anger, $B = -0.09$, 95% BC_a CI [-0.24, 0.04], $p = .15$, nor the effect of happiness, $B = 0.07$, 95% BC_a CI [-0.04, 0.26], $p = .20$, on conformity pressure was mediated by felt acceptance/rejection. Together, these findings indicate that in situations per-

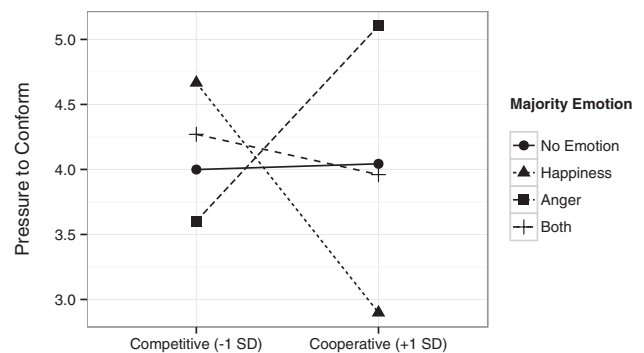


Figure 3. The relation between the majority's anger and happiness and conformity pressure in situations perceived as relatively cooperative and competitive. Note that two independent effects were combined to illustrate the additive effects of anger and happiness in relation to conformity pressure (Study 3).

ceived as cooperative, the higher conformity pressure experienced when the majority expressed more anger and/or less happiness was due to the fact that the group member felt rejected. In situations perceived as competitive, the majority's angry and happy reactions to deviance were still associated with felt acceptance/rejection, but no relation with felt conformity pressure was found.

Discussion

The results of this study replicate our finding that majority's emotions are associated with the extent to which a deviant individual feels accepted or rejected. Furthermore, consistent with our motivational perspective on conformity, we showed that in situations that are perceived as cooperative, more conformity pressure was experienced to the extent that more anger and less happiness were expressed. Furthermore, supporting our general model (see Figure 1), this relation was mediated by feelings of rejection. In situations perceived as competitive, we did not find this relationship, which is congruent with the idea that conformity is not a meaningful way of showing good group membership in a competitive setting. Most important, we found these results across a wide range of social situations, which increases confidence in the generalizability of the findings from Studies 1 and 2.

Although the critical incidents approach allows for high ecological validity and a test of our hypotheses based on people's recollections of actual situations, it also has several drawbacks, the most important of which is that it yields only correlational data. To address these limitations, we set out to replicate and extend these findings in two behavioral experiments.

Study 4

In the previous studies, we showed that a majority's anger leads a deviant individual to feel rejected, which in turn may lead this individual to experience a pressure to conform. In Study 4, we aimed to extend these findings by investigating whether anger, expressed in a cooperative setting, can lead to behavioral conformity by inducing feelings of rejection. For this purpose, we conducted an experimental group study in which groups, consisting of three participants, worked on a group problem-solving task. We manipulated the emotion expressed by the majority by instructing two of these participants to express either anger or happiness in response to ideas voiced by the third participant. A nonemotional condition, in which participants were instructed not to show their emotions, was also included as a reference condition.

In this study, conformity was operationalized as the relative influence of this third participant (faced with either a happy or an angry majority) on the outcome of the group task. We reasoned that if being faced with an angry majority leads one to feel rejected, which in turn leads one to conform, the influence of the two angry group members should be relatively high relative to the third participant's influence. Thus, we expected participants who were faced with an angry majority to have relatively less influence in their group than participants who were faced with a happy majority or those in the nonemotional condition.

Method

Participants and design. Thirty-three groups (99 participants, 22 men, $M_{age} = 20.99$, range 15–29) participated in the

experiment, which was advertised as a group creativity task. In exchange for their participation, participants received either course credit or 10.50 euro. Because we were concerned that familiarity between participants would hinder the effectiveness of the emotion manipulation, we invited four participants for each session, which allowed us to assign an individual backup task to a participant who coincidentally knew another participant (otherwise, a die roll decided which participant would receive different tasks). A check at the end of the experiment (scale ranging from *Never have seen this person* to *Best friend*) confirmed that in the final sample, no pair of participants indicated more mutual familiarity than *Have seen but have not spoken to this person*.

Groups were randomly assigned to one of three conditions: majority angry, majority happy, or majority nonemotional. Within groups in the former two conditions, two randomly selected participants received an emotion instruction, and the remaining participant (the "focal participant," described later) received instructions to show no emotion. In the nonemotional condition, all three participants received the no emotion instruction. The only exception to this random assignment was that the manipulation was never aligned with salient demographic characteristics to avoid creating a salient diversity fault line (Homan, van Knippenberg, van Kleef, & De Dreu, 2007b). For instance, if the group consisted of one female and two male participants, it was always one of the male participants who received the no emotion instruction.

Materials and procedure. The experiment consisted of a modified version of the desert survival task (Lafferty, Eady, & Elmers, 1974), which is a problem-solving task that is used in group research. In the original version of the task, the goal is to rank a list of items (e.g., a knife) according to the extent to which they may help promote chances of survival if a person is stranded in the desert. We used the Homan, van Knippenberg, van Kleef, and De Dreu (2007a) version of this task, in which participants do not receive a pre-existing list of items, but generate items themselves. By having participants first generate items individually, followed by group-wise selection of the best ideas with the individual lists as input, we could estimate the extent to which the emotions expressed in the group influenced individual contributions to the group product.

Item generation. Upon arrival in the laboratory, the three group members were seated separately and filled out a number of personality questionnaires that were unrelated to the present hypotheses. These questionnaires were followed by an introduction to the desert survival situation and an instruction to generate as many items as possible that could be useful in such a circumstance. The only constraint was that it should be possible for one person to carry the item. Participants were given 10 min to generate items.

Emotion instruction. After the individual idea generation phase had ended, participants received written instructions for the group task. These explained that the goal of the group task would be the group-wise creation of a list of as many ideas as possible, using the individual lists as input (generating new ideas during the group interaction was explicitly allowed, but too few groups made use of this possibility to analyze this variable). As an encouragement for critical evaluation of ideas, the instructions also mentioned that a bonus of 75 euro (25 euro for each participant) would be awarded to the group that generated the most ideas that were not duplicate, useless, or dangerous.

To set the stage for the emotion manipulation, we emphasized the importance of critical evaluation for successful decision making. Then we introduced the emotion instructions as “instructions on how to contribute to group decision making.” The instructions themselves were based on emotion instructions that have been used in negotiation research (Kopelman, Rosette, & Thompson, 2006; Sinaceur & Tiedens, 2006). Three versions of the instructions were used, coaching the participant to express anger, to express happiness, or to approach the group task in a rational, nonemotional manner. Rather than not providing any instructions to the focal participants, we provided these participants with instructions to “be rational,” which have been found to be effective in reducing the amount of emotion shown (Kopelman et al., 2006). Moreover, by providing the focal participants with instructions of more or less equal length to the emotion instructions, we made sure that they would not be suspicious about seeing the other two participants taking longer to read their instructions.

The basic format for each of these instructions was the same. First, the participant was told that experts agree that adopting the strategy described in the instruction (i.e., showing anger, happiness, or no emotion) would lead to optimal group performance, as it would help all group members to be open to critical ideas. Second, the instructions explained step-by-step how the strategy could be executed. For instance, in the emotion conditions, participants were instructed on nonverbal behaviors they could use to express their emotion. It should be noted that these instructions also contained a number of example phrases that implicitly instructed participants to express emotions about other participants’ ideas, instead of about the person (e.g., “This kind of idea only makes me angry”). The focal participants read that they should control their emotions and think logically. Then, to ensure elaboration of the instructions, participants were asked to summarize their strategy in their own words and write some sentences they could say during the group task to follow their strategy effectively.

Group-wise selection of ideas. Directly after studying their instructions, the participants’ seating arrangement was changed so that they faced each other. The experimenter then rolled a die to determine who would keep track of the group ideas and re-iterated the goals of the group task, emphasizing that only the best ideas should end up on the list. All materials except the individual lists of ideas and the form on which the group ideas would be written were removed. Then, participants were given 10 min to complete the group task.

Relative influence. The focal participants’ influence in the group task was operationalized as the ratio of ideas contributed by this participant to the number of ideas contributed by the other two group members. Contribution was operationalized as the number of items that appeared both on an individual group member’s list and on the final group list. In many cases, an idea (e.g., water) that was included on the group list appeared on more than one individual list. In these cases, we counted the item as having been contributed by each group member who had this idea on his or her personal list. Thus, for instance, if Group Members A and B both had “water” on their list, and “water” appeared on the group list as well, Group Members A and B both had a contribution of 1. For this reason, the sum of these counts in each group could total more than the number of ideas generated by the group. If the focal participant contributed as many ideas, on average, as the two other group members, this ratio would be 0.5, indicating that the focal

participant had an equal amount of influence as the other two group members. Ratios lower than 0.5 would reflect that the focal participant had relatively less influence than the other two group members (i.e., contributed fewer ideas) and ratios above 0.5 that the focal participant had relatively more influence.

Acceptance/rejection scale. After completing the group task, participants were seated separately again and were given a questionnaire that contained the acceptance/rejection scale from Studies 1 and 2 (Cronbach’s $\alpha = .73$).

Manipulation checks. After the participants had completed a second, unrelated group task, the effectiveness of the emotion manipulation was checked using both self-report and peer-report measures. The self-report measure was “During the group tasks, to what extent did you show . . .,” followed by two items for anger (“anger” and “irritation,” $r = .81$) and two items for happiness (“happiness” and “enthusiasm,” $r = .79$). One more item was included to check for differences in rationality (“rationality”).

For the peer-report measure, participants filled out two questionnaires, one for each of their two fellow group members. They were asked, “To what extent was the participant on your [left/right] [angry/happy/rational].” We also asked, “To what extent did the participant on your [left/right] show [anger/happiness/enthusiasm].” In order to get an estimate of the extent to which each participant had shown anger, happiness, and rationality, we first estimated the reliabilities of the respective scales. For both anger ($r = .88$ and $r = .93$) and happiness (Cronbach’s $\alpha = .87$ and $\alpha = .87$), the relevant items could be combined to form a scale.

Then, the extent to which two peers agreed about another participant’s emotional expressions was determined before we aggregated the participant level by averaging the two observations. There was significant agreement among peers about each participant’s level of anger, intraclass correlation (ICC)(1) = 0.37, $F(98, 99) = 2.16$, $p < .001$, and happiness, ICC(1) = 0.16, $F(98, 99) = 1.39$, $p = .050$, and ratings could therefore be aggregated to the participant level by averaging the peer ratings (e.g., Participants A and B each rated the extent to which Participant C had shown anger and happiness, and A and B agreed on both instances). For rationality, there was not enough agreement among peers to justify aggregation, ICC(1) = 0.10, $F(98, 99) = 1.23$, $p = .15$. Thus, no peer-reported manipulation check of rationality was possible.

Results

The data were analyzed with the lme4 R package, with a random intercept for group (unless otherwise stated), because our focal participants were nested in groups. Following the recommendation of the package author,⁶ we determined the significance of the results of the multilevel analyses by Markov chain Monte Carlo sampling from the posterior distribution of the parameters (see, e.g., Gilks, Richardson, & Spiegelhalter, 1996; 10,000 samples), which results in a confidence interval for the regression coefficient that can be interpreted analogous to bootstrapping results. This yields a more reliable hypothesis test than calculating p values from the t statistic (which is explicitly discouraged), as there is little agreement about how to correctly estimate the relevant number of degrees of freedom.

⁶ <https://stat.ethz.ch/pipermail/r-help/2006-May/094765.html>

Manipulation checks. First, the self-report manipulation checks were examined (for means and standard deviations of expressed emotion, see Table 2). When self-reported anger (square-root transformed to correct for nonnormality) was regressed on the type of instruction, the results showed that participants who had received the instruction to show anger during the group task reported having shown more anger than participants who had been instructed to show happiness, $\beta = -1.66$, 95% CI [-2.14; -1.24], or to show no emotion, $\beta = -1.52$, 95% CI [-1.96; -1.17]. Similarly, participants who had been instructed to show happiness reported having shown more happiness than participants who had been instructed to show anger, $\beta = -0.79$, 95% CI [-1.36; -0.22], or no emotion, $\beta = -0.80$, 95% CI [-1.25; -0.34]. Participants who had been instructed to show no emotion did not report having been more rational than participants who had been instructed to show anger, $\beta = -0.26$, 95% CI [-0.81; 0.24], or happiness, $\beta = -0.47$, 95% CI [-0.93; 0.03]; all *M*s and *SD*s for rationality: $5.08 < M < 5.75$, $0.81 < SD < 1.41$.

The peer-reported manipulation checks showed the same pattern for anger but not for happiness (*M*s and *SD*s in Table 2). Participants who had been instructed to show anger were reported to have shown more anger than participants who had been instructed to show happiness, $\beta = -1.41$, 95% CI [-1.92; -0.91], or no emotion, $\beta = -1.22$, 95% CI [-1.64; -0.75]. Participants who had been instructed to show happiness were reported to have shown more happiness than participants who had been instructed to show anger, $\beta = -0.79$, 95% CI [-1.34; -0.19], but not compared with those who had been instructed to show no emotion, $\beta = -0.28$, 95% CI [-0.73; 0.20].

Together, the manipulation checks indicate that the manipulation was successful in the majority angry condition, but the results regarding the majority happy condition were less clear-cut. Although the self-report measures indicate that participants who had been instructed to show happiness indeed showed more happiness than all other participants, their peers did not perceive them to be showing significantly more happiness than the participants who had been instructed to express no emotions. Thus, according to the peer reports, participants in the nonemotional condition faced the same situation as the focal participants in the majority happy condition. The absence of a difference may be explained by implicit social etiquette or display rules. In most social interactions, especially those involving unfamiliar people, the default behavior is to be nice and friendly and to smile (e.g., Hess &

Bourgeois, 2010; Hinsz & Tomhave, 1991). Although we told the control participants to show no emotion, they might have smiled in order to affiliate rather than to show happiness (see Fridlund, 1994).

Analytical strategy. To reflect the finding that, in terms of expressed emotions, the majority happy and nonemotional conditions were so similar, we decided to adapt our analytical strategy accordingly and used specific contrasts to test our hypotheses. We first describe the effects in the majority angry (coded as 1) condition versus the other two conditions combined (each coded as -0.5), and then report the (orthogonal) contrast between the majority happy (-1) and nonemotional condition (1). Furthermore, we focused only on the focal participants in the remaining analyses.

Acceptance/rejection. To test the hypothesis that focal participants would feel more rejected in the majority angry condition than in the other conditions and less rejected (i.e., more accepted) in the majority happy condition, we regressed felt rejection (square-root transformed to correct for nonnormality) on the emotion conditions using the contrast coding described previously. The results showed that the focal participants in the majority angry condition ($M = 3.12$, $SD = 1.06$) had felt more rejected than the focal participants in the nonemotional ($M = 2.08$, $SD = 0.62$) and majority happy ($M = 1.96$, $SD = 0.71$) conditions, $\beta = 0.88$, 95% CI [lower limit: 0.50]. Participants in the latter two conditions did not differ in terms of felt rejection, $\beta = 0.09$, 95% CI [-0.17; 0.35].

Relative influence. To test whether focal participants in the majority angry condition had less influence in their groups than focal participants in the other conditions, we examined the ratio of contributed ideas discussed earlier. Because all between-group variance is accounted for by these ratios, the random intercept for group had no remaining variance (i.e., the variance equaled 0) and was therefore dropped from the analysis. Thus, a regular regression analysis was conducted.

The means indicate that, as expected, focal participants in the majority angry condition ($M = 0.44$, $SD = 0.24$) had less influence than their fellow group members, as indicated by a mean lower than 0.5. Furthermore, they had less influence in their group task than the focal participants in the majority happy ($M = 0.56$, $SD = 0.35$) and nonemotional ($M = 0.53$, $SD = 0.24$) conditions. This difference was marginally significant, $\beta = -0.36$, $t = -1.51$, $p = .068$, one-tailed. The difference between the majority angry and majority

Table 2

Means (and Standard Deviations) for Expressed Emotions According to Self-Report and Peer-Report (Study 4)

Variable	Condition: Majority angry		Condition: Majority nonemotional	Majority happy	
	Instruction: Anger	Instruction: No emotion	Instruction: No emotion	Instruction: Happiness	Instruction: No emotion
Measure of anger					
Self-report	3.08* (1.56)	1.65 (0.88)	1.27 (0.50)	1.18 (0.38)	1.21 (0.33)
Peer report	2.51* (1.58)	1.23 (0.32)	1.27 (0.37)	1.17 (0.36)	1.15 (0.19)
Measure of happiness					
Self-report	4.15* (1.49)	3.30 (1.42)	4.38 (1.19)	5.24* (1.08)	4.25 (1.41)
Peer report	4.17 (1.14)	4.22 (1.04)	4.77 (0.75)	4.94 (0.95)	4.81 (0.92)

Note. Within each row, bold-faced means should be the highest for a successful manipulation.

* Mean is higher than other means in the same row, based on a 95% confidence interval.

happy conditions, on the other hand, was not significant, $\beta = -0.04$, $t = -0.26$, $p = .797$.

Mediation analysis. The next step was to test whether the focal participants' lower influence in the majority angry condition, relative to the majority happy and nonemotional conditions, could be explained by the extent to which these participants had felt rejected. For this purpose, the indirect effect of the manipulation on the influence ratio through felt rejection was estimated, and the significance of this indirect effect was checked using bootstrapping (see also Study 2, $R = 10,000$ resamples). Our hypothesis—that the focal participants' lower relative influence in the majority angry condition compared with the majority happy and nonemotional conditions could be explained by felt rejection—was supported, $B = -0.24$, 95% BC_a CI [upper limit: -0.02], $p = .04$, one-tailed. The difference in the influence ratio between the majority happy and nonemotional conditions could not be explained by felt rejection, $B = -.02$, 95% BC_a CI [-0.19 ; 0.05], $p = .59$. These findings indicate that the feelings of rejection that were experienced by the focal participants in the majority angry condition led to reduced influence in the group task, compared with focal participants in the other conditions.

Discussion

In this study, we replicated the basic findings from Studies 1–3 using an experimental group study involving real interaction. As in previous studies, group members who were faced with a majority that reacted with anger to their ideas felt more rejected than participants who were faced with a majority that did not react with anger. Feeling rejected, in turn, led participants who received angry reactions to conform more in a cooperative group task, compared with group members who were faced with a majority that showed happiness or no emotion.

It should be noted that the majority happy condition produced mixed results. Participants who had received an instruction to show happiness reported that they had shown more happiness than participants who had not been instructed to show an emotion, whereas peer-reports indicated that these participants showed the same amount of happiness. This suggests that despite intending to follow the instructions, participants who received an instruction to express no emotions may have been unintentionally smiling as much as the participants who had been instructed to show happiness. Because it can be expected that three students of similar age, who do not know each other in advance, tend to affiliate rather than reject each other in such a situation (e.g., Hess & Bourgeois, 2010; Hinsz & Tomhave, 1991), this is not an unlikely pattern of results. Thus, it may be the case that participants who had been instructed to show no emotion failed to suppress their happiness, rather than that participants who had been instructed to show happiness failed to do so. This tendency to smile for affiliative reasons, despite having been instructed to express no emotions, points to the difficulty of having a neutral or no emotion reference condition in naturalistic settings. Nevertheless, we still see these findings as being in line with the idea that expressed happiness is interpreted as a signal of affiliation (see the Introduction), as the absence of a difference in felt acceptance between the majority nonemotional and majority happy conditions paralleled the absence of a difference in the amount of happiness perceived by

peers, rather than the difference in self-reported expressed happiness.

The findings regarding the relative influence of a group member who is facing an angry majority are consistent with a conformity interpretation. However, the design of the study, and especially our operationalization of influence, leaves some room for alternative explanations. For instance, an anonymous reviewer pointed to the possibility that focal participants in the majority angry condition may have also withdrawn from the group decision-making process. Because our participants were not able to physically withdraw from the situation (as in Study 2), they may have simply abided by the majority's ideas instead of pushing their own ideas. Indeed, this passive strategy is different from the active matching of one's behavior to that of the group, which we defined as conformity, but the failure to behave as one normally would for fear of negative reactions may also be seen as a special case of conformity: conformity by omission (Cialdini & Trost, 1998). Thus, we believe that the type of social influence that the majority's expression of anger produces is that a deviant group member allows the majority to influence their outcomes (i.e., group performance and their chance of winning a prize), either through active or passive conformity. We return to the different types of social influence elicited by expressed emotions and the underlying processes in the General Discussion.

On a more general level, these data again show that emotions expressed by a majority can influence the behavior of another group member and that feeling accepted or rejected is a likely explanation. Because we measured felt rejection/acceptance after the group interaction, this chain of causality could not be established beyond doubt. In Study 5, we used a different experimental paradigm to resolve this limitation.

Study 5

In the previous studies, we showed that a majority's anger leads a deviant individual to feel rejected, which in turn leads him or her to feel pressure to conform. In Study 5, our aim was to extend these findings by directly testing the causal model using a paradigm that afforded maximal experimental control and allowed a direct measurement of conformity. For this purpose, we set up an engaging computer-mediated cooperative interaction, in which we manipulated the emotion expressed by the majority (anger vs. happiness). Furthermore, we tested the moderating influence of yet another social-contextual factor that determines the extent to which conformity is meaningful behavior if one feels rejected due to expressions of anger by the majority: the prototypicality of the deviant individual.

Prototypicality reflects the extent to which a member is seen as possessing features that are distinct characteristics of group memberships (Hogg, 2005). Prototypical group members can be said to occupy central positions in the group, while their counterparts, peripheral members, are closer to the group boundaries. Prototypical members are safely bound within the group, whereas peripheral members are more concerned with the location of group boundaries (Pickett & Brewer, 2005) and with regulating their behavior to protect their group membership (e.g., Jetten et al., 2006; van Kleef, Steinel, van Knippenberg, Hogg, & Svensson, 2007). Because conformity is a way of showing that one is a good group member (cf. Hollander, 1960; Klein et al., 2007), we may

expect to find that only peripheral members would conform more after receiving an angry reaction from a majority (given that no alternative groups are available), as they are especially concerned with gaining acceptance in the group. Prototypical members, on the other hand, are less likely to be affected by the opinion of their peers because they are stable group members and therefore less concerned with gaining acceptance (van Kleef et al., 2007). Thus, we predicted that prototypical members' behavior would be less affected by the majority's emotions than the behavior of peripheral members.

Method

The experiment, which was inspired by a study by Griskevicius et al. (2006), consisted of two parts. The first session took place in the laboratory. During this session, participants were placed in a group, evaluated several paintings, received emotional feedback from a majority about one of their evaluations, and finally rated this specific painting again. Then, 3–4 weeks later, participants were contacted for a follow-up posttest, in which the same painting was rated again. Thus, two measures of conformity could be calculated, one at the second rating during the session (Time 2 [T2] conformity) and one a few weeks later (T3 conformity).

Participants and design. Ninety-seven participants were recruited for a study about aesthetic preferences. In exchange for their participation, they received either course credit or 3.50 euro. Four participants spontaneously expressed suspicion about the reality of the experimental situation, and an additional six participants indicated that they knew at least one of the persons in the photos that represented their fellow group members (see "Introduction to the group" in the following text), which posed a problem for the credibility of the emotion manipulation. After dropping these participants, the final sample consisted of 22 men and 64 women ($M_{\text{age}} = 21.42$, range 18–35 years), who were randomly assigned to the conditions of a 2 (prototypicality: peripheral or prototypical) \times 2 (majority emotion: angry or happy) between-subjects design.

Materials and procedure. Upon arrival in the laboratory, participants learned that the aim of the experiment was to investigate the relation between personality and art preferences, and the way people communicate about art. The experiment would consist of two parts. In the first part, they would complete a personality test and then gave their opinion about a number of paintings individually. In the second part, they would have a group discussion about art with three other participants, who were taking part in the same experiment at the same time in a different building on the university campus, as we wanted to avoid having participants in the same group who knew each other personally. In reality there were no other participants taking part, nor would there be a group discussion, but the cover story was needed to make the situation and the manipulations appear genuine. After obtaining informed consent, participants were seated individually behind a computer that was used for presenting all instructions and recording all answers.

Individual ratings. After entering their demographic information and taking a bogus personality test, which was used to set the stage for the manipulation of prototypicality, the participant proceeded to evaluate 41 paintings using a slider (from 0 = *ugly* to 100 = *beautiful*). These paintings were collected from a number of

freely accessible galleries and museums (e.g., Museum of Bad Art, <http://museumofbadart.org>) on the Internet. As art can differ on many dimensions, and preferences on some of these dimensions are known to be influenced by psychological variables (e.g., need for cognitive closure increases preferences for figurative art; Wiersema, van der Schalk, & van Kleef, 2012), we attempted to keep our selection of paintings as constant as possible. Thus, we used only nonfigurative art that was photographed in full color. Pictures were cropped and/or resized to have an identical on-screen size.

Apart from lending credibility to the cover story that we were interested in the relation between personality and aesthetic preferences, rating such a large number of paintings had another aim: The group norm could be kept constant between participants. For this purpose, the painting that was rated closest to the 40th scale point was selected. We refer to this painting as the *focal painting*. Later in the experiment, participants learned that their fellow group members had consistently rated this focal painting around the 90th scale point. Thus, each participant had a different focal painting, but all participants expressed a mild dislike of their focal painting in the initial round and later learned that the group consensus was to strongly like this painting. By using the 40th scale point as the critical value, we ensured that participants could shift toward or away from the group norm on a second rating of the focal painting. Thus, on the second rating (to be discussed later), participants could both conform or express their deviance from the group if they wanted to do so.⁷

Introduction to the group. After completing the measure of individual aesthetic preferences, the participant was introduced to the other group members. This procedure, adapted from Homan, Greer, Jehn, and Koning (2010), served to make the situation appear even more genuine and to induce a sense of "groupiness." First, participants were instructed to make a photo of themselves using the webcam, which would be sent to the other group members via the network. They could make as many photos as they liked, until they were happy with the result. After sending their photo to the members of their group, participants saw photos of the other group members appearing one by one on the screen. To minimize chances that the actual participants knew the people in the photos, which could arouse suspicion, we used photos of first- and second year students from other disciplines who were photographed in the same cubicles as those in which the study was conducted. The sex of the people in the pictures was arranged so that the four-person groups (including the participant) always contained two males and two females.

Prototypicality manipulation. After having seen the photos of the other group members, participants learned that we wanted to

⁷ This is a slightly simplified description of the actual procedure, in which both the 40th and 60th scale point were used as critical values. After all paintings had been rated, difference scores to these values were calculated, and the painting with the smallest difference score to either of these values was used as the focal painting. In case of ties (e.g., a painting rated at 39 and one rated at 61), one was selected randomly from the ties. For participants who rated the focal painting at (or around) 60, the group norm was around the 10th scale point. Including the group norm (higher vs. lower than initial rating) as a factor in the analysis did not change any of the results, and this factor is therefore not discussed further. For simplicity, all effects are discussed as if the original painting had been rated at the 40th scale point (thus reversing the ratings for participants that initially rated their focal painting at or around 60).

give them some more information about their fellow group members, which was used to manipulate prototypicality. In this procedure, which was adapted from previous research (see Steinel et al., 2010; van Kleef et al., 2007), participants first read that their scores in the personality test had been compared with those of the other group members. Subsequently, in the peripheral condition, they read, "There is *little* overlap between your personality and your fellow group members. This means that you have *little* in common with the other participant and that you're *not* typical for your group." (emphasis in original). In the prototypical condition, the italicized words were changed to "much" (twice) and "very," respectively.

Majority emotion manipulation. After learning how their personality compared with that of the other group members, participants learned that aesthetic preferences are, in large part, determined by the emotions that people experience while viewing art and that personality is an important determinant of the emotions that people experience. To investigate whether emotions could indeed account for the link between personality and aesthetic preferences, the experimenter would ask participants to complete a group communication task in which every participant could indicate the emotion that he or she experienced while viewing the painting that received the most different ratings from the group members. On the following screen, the focal painting was displayed, together with the ratings of the other group members. These were presented anonymously and were all around the 90th scale point and thus constituted a descriptive norm. Since the painting that received most different ratings had been selected, the participant could deduce from this information that he or she had been the one with the different rating and that the other group members could see the participant's deviant rating on their screen.

After participants had been exposed to the group norm, the emotion communication round was introduced, which contained the manipulation of majority emotion. In this task, all group members could select an emoticon (e.g., a smiley) from a sample of 15 emoticons to represent the emotion they experienced while viewing the focal painting. If they wanted, they could also write a comment. This emoticon and comment would be sent to the other group members. First, participants learned they had been randomly selected to be the last group member to indicate their emotions. Then, depending on the condition, the group member to go first selected either an angry emoticon or a happy emoticon (i.e., a smiley) and wrote, "I don't really feel a certain emotion about this painting, but I'm happy [angry] that someone rated the painting so differently from the rest of the group, and we're going to have to talk about that. It'll be an interesting discussion!" The second group member selected the same emoticon as the first without sending a comment, and the third group member selected the same emoticon as the other two and commented "Me too!" Thus, the participant saw that three group members had the same emotion (either happiness or anger), which one of them attributed to the behavior of the participant, while the others concurred. Finally, the participant could pick an emoticon and write a comment to send to the other group members. Analysis of the emoticons chosen by the participants and their comments did not yield any insights and will not be discussed further.

T2 conformity. After indicating and commenting on their own emotions, participants proceeded to rate the same focal painting a second time. It was explained that these ratings would be made

public at the start of the group discussion, which would follow the computerized session. Thus, participants felt accountable for their behavior, and they were offered an opportunity to conceal their previous nonconformity by conforming in this round. Then, participants rated the same focal picture again using a slider (from 0 = *ugly* to 100 = *beautiful*). Because of severe nonnormality of the difference scores between the first and second ratings, the change in judgment was coded as a binary variable. Movement toward the group norm was coded as conformity ($N = 26$), and movement away from the group norm was coded as deviance ($N = 57$). No movement ($N = 3$) was coded as missing, as this behavior could not be interpreted in terms of conformity/deviance.

Acceptance/rejection scale. After completing the conformity measure, participants were informed that a few more measures would be completed before the group discussion would begin. Perceived rejection was measured using a six-item scale composed of the four items used in Studies 1, 2, and 4 and two new items ("I feel pressure to yield to the group," and "The group expects me to stay in line"; Cronbach's $\alpha = .81$).

Manipulation checks. The manipulation of majority emotion was checked by asking participants to indicate on 7-point scales (from 1 = *none at all* to 7 = *very much*) how much anger and happiness had been communicated by their fellow group members during the communication round. We avoided drawing too much attention to these emotions by having participants answer the same question for six more emotions that had also been represented by emoticons earlier during the emotion communication round (disgust, surprise, disappointment, contempt, and sadness). The manipulation of prototypicality was checked with four items (e.g., "I have little in common with my fellow group members" (reverse-scored), and "My fellow group members' personality is comparable to mine."), which were answered on 7-point scales (Cronbach's $\alpha = .91$).

T3 conformity. Upon completing all measures, participants were instructed to notify the experimenter. When the experimenter entered, the participant was told that the group discussion had unfortunately been canceled due to practical reasons. The experimenter then asked whether the participant would be willing to be contacted for some further measurements, in case his or her results showed inconsistencies or unexplainable findings. Except for one, all participants agreed and left their telephone numbers.

Three weeks after participants had taken part in the experiment, they were contacted via e-mail and invited for a posttest consisting of some more questions about art. It was explained that after analyzing the data, some questions had remained unanswered, which we wanted to resolve using the posttest. The task would consist of rating some more paintings and answering some miscellaneous questions about art. Participants were contacted a maximum of three times, once via e-mail, and then twice by telephone. The posttest was terminated 4 weeks after the end of the initial lab experiment, at which point 61 participants had taken the posttest. Participation in the posttest was not predicted by (any combination of) the manipulations.

The first part of the posttest only contained one measure of interest, which was another evaluation of the focal painting. Participants were told that we wanted them to rate some more paintings, some of which could be familiar, some of which could be new. Then, we first presented a familiar painting (a random painting selected from the 40 nonfocal paintings evaluated in the

individual rating round), then two new paintings, followed by the focal painting, and finally one more familiar painting. To reduce the possibility that a participant would attempt to recall his or her earlier rating, a different rating scale was used. Instead of the slider that was used at T1 and T2, paintings were rated on a 9-point scale (from 1 = *ugly* to 9 = *beautiful*). After completing some more questions about art, participants were thanked and given a link to a full debriefing.

Results

Manipulation checks. Participants reported that their fellow group members had shown more anger when they had received angry emoticons from the majority ($M = 5.55$, $SD = 1.60$) than when they had received happy emoticons ($M = 1.84$, $SD = 1.06$), $\beta = 1.62$, $t(84) = 12.76$, $R^2 = .66$, $p < .001$. Similarly, participants indicated that their fellow group members had shown more happiness after seeing the smiling emoticons ($M = 4.98$, $SD = 1.25$) than after seeing angry emoticons ($M = 2.60$, $SD = 1.42$), $\beta = 1.33$, $t(84) = 8.29$, $R^2 = .45$, $p < .001$. Participants also indicated that they were more prototypical of their group when they had seen that their personality was similar to their fellow group members' personalities ($M = 4.07$, $SD = 1.33$) than when they had seen that it was not ($M = 3.18$, $SD = 0.94$), $\beta = 0.72$, $t(84) = 3.58$, $R^2 = .13$, $p = .001$. There were no cross-effects of one manipulation on the other check and no interactions. Hence, the manipulations were successful.

Acceptance/rejection. As expected, participants felt more rejected when the majority had expressed anger about the participant's rating ($M = 4.16$, $SD = 0.82$) than when they had expressed happiness ($M = 2.99$, $SD = 0.83$), $\beta = 1.16$, $t(84) = 6.60$, $R^2 = .34$, $p < .001$, one-tailed. When the prototypicality manipulation was included in the model, neither a main effect of prototypicality, $\beta = -0.02$, $t(84) = -0.14$, $p = .89$, nor an interaction of the two manipulations, $\beta = .27$, $t(84) = 1.52$, $p = .13$, was found, indicating that the extent to which people felt accepted or rejected was not dependent on the prototypicality manipulation.

T2 conformity. As can be seen from Figure 4, peripheral members conformed more after an angry reaction than after a happy reaction, but this was not the case for prototypical members. Indeed, probit regression⁸ yielded a significant Emotion \times Proto-

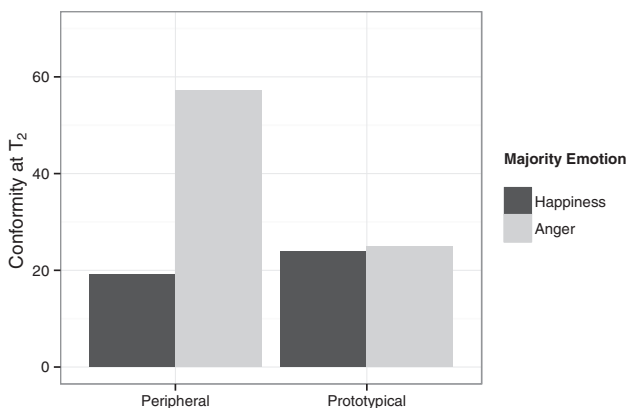


Figure 4. Proportion of participants conforming in each condition (Study 5). T2 = Time 2.

typicality interaction on T2 conformity, $B = -1.02$, Wald's $z = -1.70$, $p = .04$, one-tailed. Simple slopes indicated that within the peripheral condition, conformity was higher after anger had been expressed by the majority (12 out of 21, or 57.14%) than after happiness had been expressed (four out of 21, or 19.05%), $B = 1.06$, Wald's $z = 2.52$, $p = .01$, one-tailed, whereas this was not the case in the prototypical condition (anger: five out of 20, or 25.00%; and happiness: five out of 21, or 23.81%), $B = 0.04$, Wald's $z = 0.09$, $p = .93$.

To investigate whether peripheral members conformed after an angry reaction because they felt rejected, we conducted a moderated mediation analysis (Preacher et al., 2007; see also Study 3). The majority emotion manipulation was specified as the independent variable, conformity as the dependent variable, felt acceptance/rejection as the mediator, and prototypicality as a moderator of the path from felt acceptance/rejection to conformity (see Figure 1). The strength of the indirect effect was estimated separately for prototypical and peripheral members by calculating BC_a intervals after bootstrapping ($R = 10,000$ resamples). As in Study 3, bootstrap resamples yielding empty cells were discarded, leaving 9,704 resamples to estimate the strength of the indirect effect. The results showed that for peripheral group members, 0 was not enclosed in the 95% CI of the indirect effect of the majority emotion on conformity, $B = 0.54$, 95% BC_a CI [lower limit: 0.05], $p = .02$, one-tailed, which is consistent with the idea that peripheral members conformed more after an angry reaction than after an enthusiastic reaction because they felt more rejected. For prototypical group members, 0 was enclosed in the confidence interval, $B = -0.24$, 95% BC_a CI [-0.92, 0.45], $p = .46$, and any relation between majority emotions and conformity could therefore not be explained by felt acceptance/rejection.

T3 conformity. Because in the posttest, we employed a 9-point scale instead of the slider that was used at T1 and T2, it was not possible to calculate difference scores as the measure of conformity at T3. As nearly all participants initially rated their focal painting within three scale points of the critical value (on the 100-point slider),⁹ we were able to use the raw scores for these participants. The absolute T3 ratings ($N = 60$) were subjected to a square-root transformation to correct for nonnormality. Reported means and standard deviations are untransformed values.

Analysis of the ratings of the focal painting at T3 showed that even after 3 weeks, participants' evaluation of the focal painting was influenced by the emotional reaction of the group. As can be seen from Figure 5, the emotions of the majority had more effect on peripheral members' conformity than on prototypical members' conformity, $\beta = -0.98$, $t(56) = -1.92$, $p = .03$, one-tailed. Simple effects confirmed that, as predicted, peripheral members conformed more after an angry reaction ($M = 4.79$, $SD = 1.93$) than after a happy reaction ($M = 3.40$, $SD = 1.88$) to their original

⁸ Using the logit link function for these analyses instead, the reported p values are virtually identical (deviations in the .005–.01 range in both directions). The only change to the interpretation is that the interaction becomes marginally significant ($p = .05$).

⁹ One participant had initially rated the focal painting at 9 scale points from the critical value. We chose to discard data from this participant, as we were not convinced that we could compare this participant's T3 rating to the other participants' ratings, nor that we could simply adjust this person's T3 rating to make it comparable.

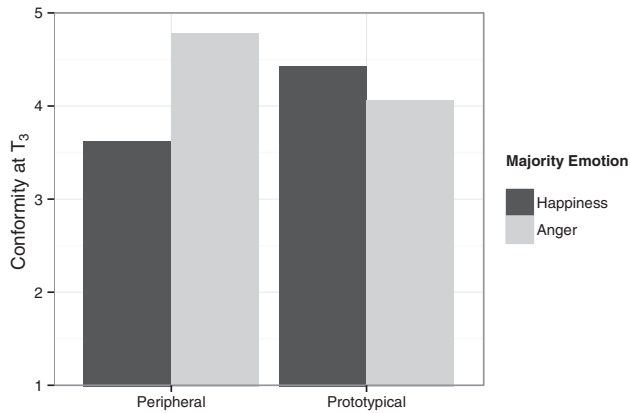


Figure 5. Conformity in the posttest, measured as the evaluation of the focal painting 3 weeks after the manipulation (Study 5). T3 = Time 3.

rating, $\beta = 0.77$, $t(56) = 2.11$, $p = .02$, one-tailed. Also as predicted, prototypical members' conformity did not differ as a function of the group's emotion ($M_{\text{anger}} = 4.06$, $SD = 1.75$; $M_{\text{happiness}} = 4.43$, $SD = 1.87$), $\beta = -0.21$, $t(56) = -0.58$, $p = .28$, one-tailed.

The fact that conformity was found in peripheral members even 3 weeks after the emotion manipulation raised the question if these effects could also be explained by the extent to which the participant had felt accepted or rejected during the experiment. This possibility was examined using another moderated mediation analysis, which followed the same logic as described under T2 conformity. The strength of the indirect effect was estimated separately for prototypical and peripheral members by calculating BC_a intervals after bootstrapping 10,000 resamples. The results showed that in the peripheral condition, 0 fell outside the 95% CI of the indirect effect of the majority emotion on conformity, $B = 0.34$, 95% BC_a CI [lower limit: 0.15], $p = .002$, one-tailed, indicating that peripheral members who had received an angry reaction from the majority 3 weeks earlier conformed more than those who had received a happy reaction because these participants had felt more rejected. Also as before, and in line with the predictions, no mediation was found for prototypical members, as shown by the fact that 0 was enclosed in the confidence interval, $B = -0.03$, 95% BC_a CI [-0.32, 0.22], $p = .79$. Thus, peripheral members conformed after the majority reacted with anger to their evaluation because they felt rejected, whereas prototypical members' behavior was not affected by the majority's emotions.

Discussion

We replicated the finding that the majority's anger leads a deviant individual to feel more rejected, whereas the majority's happiness leads that individual to feel less rejected (i.e., more accepted). In line with our predictions, peripheral members conformed more after receiving an angry reaction than after a happy reaction, which is congruent with the idea that conformity is a means of showing their group credentials (Hollander, 1960; Klein et al., 2007). For prototypical members, we predicted that there would be little to gain by conforming, and the results showed that these members indeed did not conform in response to anger. These

effects were not only found immediately after the influence situation but were even obtained 3 weeks later. It is important to note that for both the immediate and delayed measurements, peripheral members' conformity to the groups' evaluation of the painting could be explained by the extent to which they had felt rejected. Together, these findings show that a majority may induce conformity in a deviant, peripheral member by reacting with anger, whereas a happy reaction does not lead to behavioral change.

A particularly striking finding in this study is that changes in opinion can be found even a few weeks after seeing three angry emoticons and an angry statement. One feature of this experiment that might have been important in producing this effect is that the participants had never seen the paintings before. Earlier research has shown that it is more difficult to influence an already existing attitude (see, e.g., Crano & Prislin, 2006), so using an unfamiliar attitude object may have enhanced the effects of the emotion manipulation. However, Asch (1956) showed that conformity might even be observed when a majority is obviously wrong, which suggests that conformity caused by the majority's emotional reactions might even be found when someone is strongly convinced about the validity of his or her attitudes. Future research could explore whether this is indeed the case.

General Discussion

Taking a social-functional perspective on emotion (e.g., Fischer & Manstead, 2008; Frijda & Mesquita, 1994; Keltner & Haidt, 1999; Parkinson, 1996; van Kleef, 2009), we examined how two emotions—happiness and anger—shape conformity processes in groups. We hypothesized that these emotions, if expressed by a majority of a group to which one belongs, are interpreted as signals of one's inclusionary status and that these emotion signals can influence the behavior of an individual group member. Specifically, we predicted that if a majority expresses anger in response to an act of deviance by one individual, the rejection experienced by this individual may lead to conformity if the individual is motivated to gain (re)acceptance in the group and if conformity is a means to this end. Happiness, on the other hand, was theorized to be interpreted as indicative of acceptance, thereby signaling no need for behavioral change, which would lead an individual to persist in deviance.

In line with our theorizing, Studies 1–5 consistently showed that if a majority expresses anger toward a deviant group member, this individual feels more rejected, whereas if the majority expresses happiness, the deviant individual feels less rejected (i.e., more accepted). Study 1 furthermore suggests that it is not a general negative emotional reaction but specifically anger that produces the feeling of rejection, because anger leads to stronger feelings of rejection than a neutral reaction, whereas disappointment does not. In the remaining studies, we showed that the deviant's behavior in response to these emotion expressions can be explained by the extent to which he or she is motivated to seek re-acceptance by conforming. In Study 2, we have shown that the majority's anger may push the deviant individual out of the group if belonging in an attractive alternative group is possible. If no alternative groups are available, conformity is more likely. Study 3 then showed that in a cooperative setting, a deviant individual experiences a pressure to conform if the majority expresses anger. In cooperative

settings, deviance can frustrate effective coordination, whereas it does not in competitive settings. Thus, in cooperative settings (but not in competitive settings), one can show commitment to the shared goal by conforming, thereby increasing chances of being re-accepted. In Study 4, we replicated these results in a cooperative group interaction study, which showed that participants who were faced with an angry majority felt more rejected and therefore had relatively less influence on their group outcomes than participants who were facing a happy or neutral majority. Finally, in Study 5, we examined the process in yet more detail and found that only peripheral and not prototypical members conformed more after an angry response. This finding is consistent with our motivational perspective, because peripheral members could show good group membership by conforming, whereas prototypical members are safely bound within the group and therefore have less to gain by conforming.

Theoretical Implications

By highlighting these effects of anger and happiness in a group context, we contribute to the growing literature on the social functions of emotions (e.g., Fischer & Manstead, 2008; Frijda & Mesquita, 1994; Keltner & Haidt, 1999; Parkinson, 1996; van Kleef, 2009) and specifically the functions that emotions have in groups. Although the angry reactions that may arise in groups in response to deviance have been described previously (Marques et al., 1998; Nemeth & Wachtler, 1974), the impact of this anger on the deviant individual has never been investigated. By analyzing the effects of emotions in this context, we have shown that a majority's anger and happiness lead the deviant individual to feel rejected and accepted, respectively, thereby influencing the behavior of the deviant. The motivational effects of receiving an angry reaction can be so profound that they persist over time, resulting in conformity to the group norm even several weeks later (Study 5).

In their seminal article detailing the social functions of emotions at four levels of analysis, Keltner and Haidt (1999) proposed three social functions of emotions at the group level of analysis. First, collectively shared emotions help individuals define group boundaries and identify group members. Second, emotions may help individuals define and negotiate group-related roles and statuses. Third, collective emotional behavior may help groups resolve potential problems. Our findings speak to the first two functions by showing that emotional expressions have consequences for a target group member's perception of his or her inclusionary status in the group, which has implications for that person's status within the group and for group boundaries. Additionally, our results support the third function by showing that emotions are functional in regulating individual members' behavior in order to achieve collective goals. We have demonstrated that the effectiveness of anger in bringing about behavioral change in deviant group members is limited by a number of situational factors, such as the perceived competitiveness of the situation (Study 3) and the extent to which a deviant group member is prototypical (Study 5).

We believe that considering the functionality of group members' emotions in bringing about behavioral change in fellow group members may shed light on many intragroup processes. Noteworthy in this respect is that Studies 3, 4, and 5 are, to our

knowledge, the first studies that show that feeling rejected by a group can lead to changes in behavior that are aimed at regaining acceptance in the same group. Although previous research has shown that being socially excluded from a group may lead to conformity in a different group (e.g., Williams et al., 2000), it is usually found that exclusion provokes anger and leads people to derogate or aggress against the group that has excluded them (e.g., Bourgeois & Leary, 2001; Buckley, Winkel, & Leary, 2004). We offer two explanations for this difference. First, most paradigms that are used for studying social exclusion offer few possibilities for the excluded person to seek re-acceptance, as they are aimed at showing the effects of exclusion on one's functioning. For instance, in the cyberball paradigm (e.g., Williams et al., 2000), participants have no behavioral options while being ostracized. Thus, even if they would want to, participants have no means to seek re-acceptance. Second, the studies in which participants could act toward the group they were excluded from were structured in a way that participants were not accountable for their actions, thus inflating the likelihood of aggression (e.g., Prentice-Dunn & Rogers, 1982). Also, consistent with our motivational perspective, this may have simultaneously reduced the likelihood of prosocial behavior, as there is nothing to gain by conforming if one's actions cannot be identified. Thus, we think that a crucial factor in inducing conformity to the group that one is excluded from is whether there is a possibility to show that one is a valuable group member (Hollander, 1960; Klein et al., 2007).

Another reason why it is noteworthy that we found conformity to the same group after an angry reaction from the majority is that emotions expressed by one person tend to trigger similar emotions in other people (e.g., Hatfield et al., 1994). Thus, the angry reaction from the majority might have produced anger in the deviant individual (see also Molden et al., 2009). The fact that we observed conformity in a situation that was likely to elicit anger and the accompanying aggressive tendencies contrasts with Smart Richman and Leary's (2009) argument that feeling anger in response to social exclusion is always accompanied by antisocial responses. If this were the case, our participants should have conformed less after an angry reaction, which is the opposite of what we found in cooperative settings (Studies 3 and 4) and for peripheral members (Study 5). In order to tease apart the antisocial effects of feeling anger and the prosocial effects of felt rejection, future research could fruitfully pit prosocial and antisocial responses directly against each other. In any case, these effects suggest that in the situations studied here, participants' interpretation of the majority's anger was more influential in shaping their behavior than was their reciprocal anger (van Kleef, 2009; see also Chow, Tiedens, & Govan, 2008). This potency of the interpretation of an emotional expression in shaping behavior points to the importance of considering inferential processes in describing the interpersonal effects of emotions, a conclusion that is in keeping with recent theoretical developments (e.g., emotions as social information [EASI] theory; see van Kleef, 2009; van Kleef et al., 2010, 2011).

Our findings also contribute to the understanding of the interpersonal effects of emotions. According to van Kleef et al. (2010), emotions may be categorized into families (see also Roseman, Wiest, & Swartz, 1994) on the basis of their interpersonal effects.

Specifically, van Kleef et al. (2010) drew a distinction among aggressive emotions (such as anger and irritation), affiliative emotions (such as happiness and contentment), supplication emotions (such as disappointment and sadness), and appeasement emotions (such as guilt and interpersonal regret). Congruent with this distinction, the effects of happiness and anger were clearly distinguishable from each other across all studies, and both differed from the effect of disappointment (Study 1). Also, we indeed found strong correlations between the different affiliative emotions that we measured, and the same was true for the aggression emotions irritation and anger (Studies 3 and 4). Furthermore, enthusiasm (Studies 1 and 2) and happiness (Studies 4 and 5) produced highly similar effects on felt acceptance. Thus, these findings support the idea that emotions may be grouped in families based on their interpersonal effects and that different emotions that are part of the same family produce comparable interpersonal effects.

In the present studies, we did not include emotions from still another emotion family, namely, social exclusion, such as contempt, disgust, or scorn (see Fischer & Roseman, 2007; Roseman et al., 1994). A crucial difference between anger and these social exclusion emotions may be that anger does not communicate that the other person is inferior and thus not even worthy of attention, as scorn and contempt do (cf. Fischer & Roseman, 2007; Fiske, 2010), but rather the opposite. Even though emotions in the aggression family, such as anger, may be interpreted as signals of rejection, anger may specifically hold the promise of re-acceptance if the other changes his or her behavior. Social exclusion emotions on the other hand do not hold this promise, and it could be an interesting venue for future research to examine the interpersonal effects of social exclusion emotions on group processes.

On the surface, our findings bear some resemblance to prior findings regarding the interpersonal effects of happiness and anger on the dyadic level. For instance, individuals concede more to a negotiation partner who expresses anger about an offer in a mixed-motive negotiation (e.g., Sinaceur & Tiedens, 2006; van Kleef, De Dreu, & Manstead, 2004a, 2004b). Although this similarity may suggest that to some extent, the interpersonal effects of a given emotion family on one level may have similar effects on different levels of analysis, differences between the situations and findings abound. For instance, it should be noted that this increased compliance after an angry reaction was found in mixed-motive situations with clear competitive incentives, whereas our results suggests that the majority's anger elicits conformity mainly in cooperative settings (Study 3). Furthermore, generalizing from one level to another is complicated by moderators that are relevant only on one level of analysis, such as prototypicality (Study 5). Thus, similarities notwithstanding, we believe one should be careful of blindly generalizing effects from one level to another, and any generalization should be empirically tested before being accepted as valid.

Throughout this article, we consistently found that the majority's happiness leads a deviant individual to feel accepted, yet we found no behavioral effects of happiness when compared with a neutral reference condition in Study 4. Indeed, as we stated in the Introduction, we anticipated little behavioral change on the part of the deviant individual after a happy reaction. Does this mean that expressions of happiness within

groups can never bring about behavioral change? We do not think so. As we were interested in how deviants are affected by the majority's emotional expressions, the situation may have restricted the behavioral options for the deviant. That is, there is little room to move away from the group norm when one is already breaking the group norm. Thus, we believe that in a different situation, where opinions deviating from the group's consensus are likely to be suppressed (e.g., decision making under time pressure), happiness may actually, through its reducing effects on conformity pressure (Study 3), stimulate deviance. Furthermore, the interpersonal effects of happiness within groups are possibly more delayed than the effects of anger. For instance, through its acceptance signaling function, happy reactions may over time help to build one's self-esteem (Leary, Tambor, Terdal, & Downs, 1995), building the confidence to speak up more often (Baumeister, Campbell, Krueger, & Vohs, 2003). Given that people want to maintain a sense of uniqueness while feeling part of the group (Brewer, 1991; Hornsey & Jetten, 2004), expressions of happiness may guide people in finding acceptable ways of expressing their uniqueness (i.e., deviance), which helps them find such an optimally distinctive position in groups (Brewer, 1991), for instance, by taking on different roles and responsibilities in groups (Hornsey & Jetten, 2004).

Strengths, Limitations, and Directions for Future Research

A strength of the current research is that the effects were found across four different paradigms. Studies 1 and 2 afforded much experimental control through the use of vignettes but may be criticized for tapping into naïve theories about emotion (Parkinson & Manstead, 1993), instead of actual reactions to emotional expressions. By using a critical incidents approach in Study 3, we tapped into actual experiences of being deviant in a group, thereby offering great ecological validity and avoiding shortcomings of the vignette approach in Studies 1 and 2. Study 4 then replicated these findings in a cooperative group study involving a behavioral measure of conformity. Finally, by bringing participants in a situation in which the majority's emotions were strictly contingent on their behavior in Study 5, we were able to establish causality in the mediating chain involving feelings of acceptance/rejection. Furthermore, by doing a follow-up posttest, we could determine that the effects of feeling rejected after an angry reaction are so profound that they lasted for weeks. Thus, across situations and paradigms, all results were in line with our hypotheses and strongly supported our motivational model (Figure 1), showing the robustness of the studied phenomena.

One important issue that might need additional inquiry is to further tease apart the different social influence processes that underlie the behavioral conformity effects we observed. As our participants adjusted their behavior because they felt rejected, it is tempting to conclude that our participants were driven by a desire to affiliate (Cialdini & Goldstein, 2004), and therefore that we studied a type of normative influence (Deutsch & Gerard, 1955). Yet, we do not think that other types of social influence should be ruled out. For instance, the fact that we observed conformity even 3 weeks after the influence situation (Study 5) indicates that

informational influences may have been at work as well. Furthermore, the finding that receiving angry reactions from a majority reduced a group member's influence in Study 4 may also be explained by withdrawal. This may be seen as a case of conformity by omission (Cialdini & Trost, 1998), where one fails to behave in a certain way (i.e., contribute ideas) because others would not approve of this behavior. These various types and reasons for conformity may well reflect the two opposing consequences of feeling rejected that we studied in Study 2: the desire to leave the group, and the desire to remain in the group. It is likely that the situation is crucial in determining whether one motive prevails over the others, and which strategy individuals choose to balance these competing behavioral tendencies. For instance, whether a participant is forced to give a response (i.e., perform one identity or another; Klein et al., 2007) may be crucial in determining how different motives translate into behavior. Further research may shed light on this issue.

An alternative explanation for our findings could be that the observed conformity was not produced by feeling rejected, but by feeling guilty or shameful of the norm transgression (Baumeister, Stilwell, & Heatherton, 1994; Eisenberg, 2000; Nugier, Niedenthal, Brauer, & Chekroun, 2007). Although we did not discuss this in the respective sections, we did in fact include measures of guilt and shame in all studies. The results, however, showed that our manipulations did not affect self-reported guilt and shame, nor did we find any indirect effects of anger on the dependent variable through self-reported guilt¹⁰ and shame.¹¹ Thus, a "moral" mechanism through induced guilt and shame appears to be unable to account for conformity induced with anger.

Of course, a situation in which one member deviates from the group's consensus is but one of the many permutations of group settings that could be analyzed. Thus, it is an important question to what extent our findings are restricted to this specific situation. For instance, it may not require a majority who expresses anger in order to feel rejected as a deviant. Similarly, it is possible that people may feel rejected if other people express anger toward them even though they are not yet deviant. Thus, whether people feel rejected or accepted if others express anger or happiness about their behavior and whether this results in social influence may depend on a complex array of factors. Considering the potential complexity of the situation, it is no surprise that research so far has focused mainly on relatively well-defined dyadic situations (e.g., negotiations; van Kleef, De Dreu, & Manstead, 2004a, 2004b) or has focused mainly on group-level processes such as emotional contagion (e.g., Barsade, 2002; Totterdell, 2000). We think that it is important to further our understanding of the more intricate emotional processes that impinge on individuals within groups, as most of human life takes place in a group context and the many processes that play a role in those settings determine much of human behavior. Thus, we consider this set of studies an initial step into a better description of how emotions shape intragroup influence dynamics.

In conclusion, we have shown that in a group context, happiness and anger are interpreted as signals of a target's inclusionary status. It is happiness that produces the comfortable feeling of acceptance, whereas anger creates a temporary sensation of distance between the individual and the group. By leaving the door

open for re-acceptance, anger may produce lasting changes in the behavior of individual group members.

¹⁰ No main effects of the emotion manipulation on guilt were found in Studies 1, 2, 4, or 5, and moderated mediation analyses revealed no mediating role of guilt between the effect of majority emotions and conformity pressure in Study 3: $B_{\text{cooperative}} = -0.002, p = .54$; $B_{\text{competitive}} = 0.001, p = .96$ (p value is based on bootstrapping with 10,000 resamples).

¹¹ No main effects of the emotion manipulation on shame was found in Studies 1, 2, and 5, and moderated mediation analyses revealed no mediating role of shame between the effects of majority emotions and conformity pressure in Study 3: $B_{\text{cooperative}} = 0.06, p = .18$; $B_{\text{competitive}} = -0.01, p = .78$ (p values are based on bootstrapping with 10,000 resamples).

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