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Emotional expressions as social signals of rejection and acceptance: Evidence from the Affect Misattribution Paradigm

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HIGHLIGHTS

- Happy expressions signal more acceptance than other emotional expressions.
- Angry expressions signal more rejection than other negative emotional expressions.
- The predicted associations are reliable at presentation times of only 50 ms.
- Effects are consistent across three conceptualizations of acceptance and rejection.
- These findings help explain consequences of expressed emotions in dyads and groups.

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ABSTRACT

Inclusion in social groups is vital to human survival and wellbeing. We propose that emotional expressions signal acceptance versus rejection to observers. Based on this idea, we hypothesized that happy facial expressions prime acceptance, whereas angry expressions prime rejection. In six experiments using the Affect Misattribution Paradigm (Payne, Cheng, Govorun, & Stewart, 2005), we tested to what extent observers associate facial expressions (angry, happy, sad, fearful, and neutral) with three different operationalizations of acceptance and rejection (accept/reject, warm/cold, close/distant). A meta-analysis on these experiments revealed that angry expressions were more strongly associated with rejection than other (negative) expressions, and that happy expressions were more strongly associated with acceptance than other facial expressions. Effects were stable and robust at presentation times of 50 ms and higher and were similar across conceptualizations of acceptance/rejection. We discuss implications for theorizing on the social functions of emotions and the processing of emotional expressions.

Given the evolutionary significance of group life (Cosmides & Tooby, 1992; Dunbar, 1992), it would be adaptive for human beings to be sensitive to moment-to-moment variations in the extent to which fellow group members accept them (Baumeister & Leary, 1995). But how do people gauge their level of acceptance? Adopting a social–functional approach to emotion (Fischer & Manstead, 2008; Frijda & Mesquita, 1994; Keltner & Haidt, 1999; Van Kleef, 2009), we propose that individuals use the emotional expressions of others as implicit signals of acceptance versus rejection. Emotional expressions inform observers about a person's specific evaluation of a situation, and they communicate social motives and behavioral intentions (Fridlund, 1994; Hess & Fischer, 2013; Knutson, 1996). Thus, different emotional expressions – even two different negative emotional expressions – may have different implications for an observer's relation to the group. Here, we aim to show that different emotional expressions signal different degrees of acceptance and rejection. We develop and test the hypotheses that (i) angry facial expressions are more strongly associated with rejection than other (negative) facial expressions, and that (ii) happy facial expressions are more strongly associated with acceptance than other facial expressions. Furthermore, we test whether these associations may be found even when facial expressions are presented for very short durations.

The social–functional approach to emotions posits that emotional expressions play a vital role in regulating social life (Keltner & Haidt, 1999). These social functions are typically investigated by studying the *consequences* of emotional expressions for (social) behavior within a particular context. Research into such social consequences indicates that the effects of any given emotional expression may differ considerably depending on the social context, the individual's resources, and which type of consequences are investigated. This can be illustrated by the case of anger: Some research has documented destructive consequences of anger expressions, such as lowered relationship satisfaction

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and increased conflict in romantic relationships (Sanford & Rowatt, 2004), an increased likelihood of divorce (Gottman & Levenson, 2002), and retaliation and impasses in conflict resolution (Friedman et al., 2004; Kopelman, Rosette, & Thompson, 2006; Van Kleef & Côté, 2007). However, other research has documented favorable outcomes of anger expressions, such as greater concessions from counterparts in negotiations (Van Kleef, De Dreu, & Manstead, 2004), increased effort and task performance of subordinates (Sy, Côté, & Saavedra, 2005; Van Kleef, Homan, Beersma, & Van Knippenberg, 2010), increased conformity of deviant group members (Heerdink, Van Kleef, Homan, & Fischer, 2013), enhanced learning performance of students (Van Doorn, Van Kleef, & Van der Pligt, 2014), and long-term improvement of intimate relationships (Fischer & Roseman, 2007).

Findings regarding the social consequences of other emotions are similarly mixed. For instance, some studies indicate that expressions of happiness increase affiliative and cooperative tendencies among observers, especially in communal relationships (Clark, Pataki, & Carver, 1996). Other studies, however, suggest that expressions of happiness evoke exploitation, especially in competitive settings (for a review of this literature, see Van Kleef, De Dreu, & Manstead, 2010). Furthermore, sad and fearful expressions have been found to increase affiliation and helping (Barnett, Howard, Melton, & Dino, 1982; Clark, Oullette, Powell, & Milberg, 1987; Clark & Taraban, 1991; Yee & Greenberg, 1998), especially in communal relationships (Clark et al., 1996). However, other research has shown that people tend to avoid interactions with (chronically) sad individuals when possible, because such interactions tend to be draining and not socially rewarding (e.g., Coyne, 1976).

To better understand how the same emotional expression may have both positive and negative social consequences, we believe that it is useful to draw a distinction between short-term, immediate *signals* conveyed by emotional expressions, and the longer-term *consequences* of expressing an emotion. In this view, emotional expressions convey elemental social signals to an observer that are relatively stable across situations (Fridlund, 1994). How these social signals affect an observer (i.e., their consequences) does not only depend on the social signal itself, but also on contextual factors that determine the relevance of a particular social signal to one's current goals. Focusing on the social signals conveyed by emotional expressions thus also helps us gain an understanding of the type of contextual factors that may be relevant in determining the consequences of a particular emotional expression. Our focus here is on social signals of acceptance versus rejection, as this constitutes a key dimension of social life.

Emotional expressions as signals of acceptance and rejection

Acceptance and rejection may be seen as the extremes of a bipolar dimension that represents one's level of acceptance. To be accepted is a fundamental human need (Baumeister & Leary, 1995), and accordingly experiences that negatively affect one's level of acceptance have a great impact on people. For instance, research has shown that feeling rejected is a highly aversive experience (Williams, 2007), with a neural activation pattern similar to physical pain (Eisenberger & Lieberman, 2004). Rejection can be a strong motivator of both antisocial behavior (Wesselmann, Butler, Williams, & Pickett, 2010; Williams, 2007) and behavior aimed at regaining acceptance such as ingratiation (Romero-Canyas et al., 2010) and conformity (Heerdink et al., 2013). At the other end of the dimension, acceptance can be conceptualized as a state of increased (social) safety that facilitates development and self-expression (Heerdink et al., 2013; Ryan & Deci, 2000).

Our hypotheses focus on two prevalent emotion displays that we believe to be highly consequential for an observer's position in the group: anger and happiness. The expression of happiness is typically associated with affiliative social motives (Fischer & Manstead, 2008; Fridlund, 1994). People with an intention to affiliate smile more (Clark et al., 1996; Kraut & Johnston, 1979), and those who smile are also perceived as having affiliative intentions (Hess, Blairy, & Kleck, 2000; Knutson, 1996). In terms of consequences, happiness has been theorized to improve social bonds (Fischer & Manstead, 2008). We therefore predict that happy expressions are interpreted as signals of acceptance.

Anger, on the other hand, is an emotion that is often linked to antisocial behavior and aggression (Averill, 1982). People express anger when they intend to change another person's behavior (Fischer & Roseman, 2007), thereby signaling that certain behavior is unacceptable. The expression of anger in close relationships is predictive of short-term divorce (Gottman & Levenson, 2002), and it is related to both decreased relationship satisfaction and increased conflict (Sanford & Rowatt, 2004). Yet, Fischer and Roseman (2007) found that anger can also be effective in eliciting behavioral change (see also Heerdink et al., 2013). These social consequences of angry expressions align with the effects of social rejection described above. We therefore propose that angry expressions may be seen as signaling a (temporary) problem in the relationship between people, and we predict that angry expressions are interpreted as signals of rejection.

Like happy expressions, sad and fearful expressions have also been found in some studies to increase affiliation, particularly in communal relationships (Clark et al., 1996). However, these social consequences are typically attributed to these emotional expressions signaling a need for help (Clark et al., 1996), rather than signaling acceptance. Thus, although the social consequences of sadness and fear may partially overlap with those of happiness in some cases, we argue that these expressions convey different social signals (i.e., a need for help vs. acceptance, respectively). We therefore expect happy and angry expressions to be stronger signals of acceptance and rejection than fearful and sad expressions.

If expressions of happiness and anger are indeed robust signals of acceptance versus rejection, these associations may be expected to generalize to other conceptualizations of the acceptance/rejection dimension. Williams and Bargh (2008) suggest that acceptance and rejection are grounded on the experiences of warmth and coldness, respectively (see also Zhong & Leonardelli, 2008). Warmth is the first dimension on which people judge others (Fiske, Cuddy, & Glick, 2007), which is consistent with the possibility that signs of acceptance versus rejection can be quickly gleaned from others' nonverbal behavior. Similarly, it has been argued that social distance shares a conceptual basis with other kinds of distances (e.g., spatial; temporal; Trope & Liberman, 2010; see also IJzerman & Semin, 2009). It follows that acceptance and rejection are linked to closeness and distance as well.

Based on these theoretical considerations, we formulated two hypotheses: Happy facial expressions are associated with acceptance to a greater extent than other facial expressions (Hypothesis 1); and angry facial expressions are associated with rejection to a greater extent than other negative emotional facial expressions (Hypothesis 2). We further examined to what extent these associations generalize across various conceptualizations of acceptance versus rejection (i.e., accept/reject, warm/cold, or close/distant). If the predicted effects are robust, we should find that the associations emerge irrespective of the particular conceptualization of acceptance versus rejection.

The Affect Misattribution Paradigm

To test whether facial expressions are indeed associated with rejection and acceptance, we conducted a series of six experiments using the Affect Misattribution Paradigm (AMP; Payne, Cheng, Govorun, & Stewart, 2005). The AMP measures implicit associations by assessing the extent to which primes influence responses to subsequently presented Chinese ideograms. Given that we used acceptance/rejection instead of the positive/negative judgments that were used in the original AMP, our version of the AMP was similar to semantic variants of the task, in which the primes activate conceptual knowledge that is subsequently misattributed to the ideograms (e.g., Blaison, Imhoff, Hühnel, Hess, & Banse, 2012; Gawronski & Ye, 2014).