Telescopes and microscopes of motivation: Emulative goals in admiration and envy
differ in abstractness and temporal orientation

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Abstract

Admiration and envy both stem from perceiving superior others. A recent debate centers on the motivational qualities of these emotions. Some scholars argue that, compared to admiration, envy is characterized by a stronger motivation to self-improve by emulating upward comparison standards. Mounting evidence suggests, however, that both admiration and (benign) envy can involve upward motivation. Yet, whether and how their motivational characteristics can be distinguished is unclear. We propose that emulative goals in admiration and envy differ in terms of their abstractness, explaining inconsistencies in prior research and pointing toward complementary functions of admiration and envy. In Study 1 ($N = 193$), participants recalled and re-experienced episodes of admiration or benign envy and listed goals elicited in these episodes. Additionally, in Study 2 ($N = 416$), some participants recalled episodes of malicious envy. Participants and blinded, external raters evaluated the concreteness versus abstractness of the goals. Furthermore, we assessed the goals' temporal orientation. The results support that upward motivation in admiration is abstract and oriented toward improving in the long term, whereas upward motivation in benign envy involves specific goals and is oriented toward short-term gains. These findings suggest that admiration and envy fulfill their motivational functions in different ways.

Keywords: admiration, benign and malicious envy, emulation, motivation, social comparison

Telescopes and microscopes of motivation: Emulative goals in admiration and envy differ in abstractness

Encountering people who excel can elicit strikingly different emotions. To learn that someone has broken an athletic record, is a gifted artist, or has received a prized award can fill us with intense admiration. It is not difficult to imagine however, that becoming aware of the superior performance, characteristic, or possession of another person can just as well lead to the excruciating pain of envy. Even though recent research has identified how experience and appraisals of admiration and envy differ, it has posed a riddle about the motivational qualities of these emotions. Indeed, one of the most controversial problems (for reviews, see Archer, 2019; Onu, Kessler, & Smith, 2016; Schindler, 2019) in research on admiration and envy is whether both entail emulative goals. Does feeling admiration as well as envy mean being inspired by the superior example of others? Furthermore, if so, can upward motivation in admiration and envy be distinguished? Here, we investigate the idea that the emulative tendencies of admiration and envy differ in their level of goal construal.

Upward motivation in admiration and envy

Functional accounts of emotions are premised on the notion that motivation and action tendencies are an essential element and inseparable characteristic of emotions (e.g., Frijda, 1986; Keltner & Gross, 1999; Moors, Boddez, & De Houwer, 2017). According to this view, emotions originate from, reflect, and are for goal pursuit. Self-relevant goals not only determine whether a situation elicits an emotion, the motivational tendencies that are activated in emotional episodes are assumed to guide behavior. Thus, knowing how people represent important goals in emotional situations is central to understanding emotions themselves. In the case of admiration and envy, a contested question concerns whether and how they differ in upward motivation.

The notion that envy can entail emulative, upward motivation has a long history (see e.g., Parrott, 1991) and has become a consensus among researchers of envy (Crusius, Gonzalez, Lange, & Cohen-Charash, 2020). Indeed, envy can cause increased desire for others' superior goods (Crusius & Mussweiler, 2012; Van de Ven, Zeelenberg, & Pieters, 2011a), predict higher goal setting (Lange & Crusius, 2015a), elicit more effort (Lange & Crusius, 2015b), and be a precursor for higher performance (Schaubroeck & Lam, 2004). A growing amount of theorizing and empirical research (Crusius & Lange, 2017; Falcon, 2015; Lange, Blatz, & Crusius, 2018; Lange & Crusius, 2015b; Lange, Weidman, & Crusius, 2018; Van de Ven, Zeelenberg, & Pieters, 2009) supports that emulative tendencies are characteristic of a specific form of envy—benign envy.

From a functional perspective, this work holds that the pain in envy can be tied to different pathways of pursuing threatened social status. It posits that self-relevant, threatening upward social comparisons cause painful feelings of inferiority that characterize all episodes of envy. Crucially, however, an episode of envy can evolve as *benign envy*, entailing a longing to improve oneself and emulate the envied person, and *malicious envy*, entailing hostile thoughts and intentions directed at harming the other (Lange, Weidman, & Crusius, 2018). Functionally, benign envy has been proposed to reduce status differences by prompting efforts to level oneself up. In contrast, malicious envy might be aimed at reducing status differences by leveling superior others down (Crusius & Lange, 2017; Van de Ven et al., 2009). Thus, according to this theoretical approach, upward motivation is a defining element of benign envy.

Admiration is a positive emotion that also results from perceiving others who excel with regard to an important domain of social comparison (Onu et al., 2016; Schindler, Zink, Windrich, & Menninghaus, 2013). There is disagreement about the kinds of comparative domains that elicit admiration. Some scholars limit the term to comparisons about skill (Algoe & Haidt, 2009; Onu et al., 2016) distinguishing admiration from moral elevation. Here, we

follow the usage of the term in a more general way that encompasses admiration for skill and for moral virtue (e.g., Archer, 2019; Schindler, 2019). In recent years, a rising amount of attention has been devoted to conceptualizing and investigating admiration. Nevertheless, nature and functions of admiration remain debated. Potentially the most controversial debate about admiration concerns whether it motivates people to emulate others. Even though there is agreement that admiration promotes affiliation and pro-social behavior toward people who excel (Algoe & Haidt, 2009; Onu et al., 2016; Schindler et al., 2013), whether and how admiration fuels upward goal pursuit is contested in psychological as well as philosophical treatments. Some scholars have argued that, in contrast to envy, admiration might even lead to complacency rather than effort (for recent reviews, see Archer, 2019; Onu et al., 2016; Schindler, 2019)—perhaps most eloquently expressed in Kierkegaard’s (1849/1980, p. 86) dictum that “Admiration is happy self-surrender; envy is unhappy self-assertion.”

A growing amount of data supports that admiration entails emulative tendencies, even if the evidence is partly inconsistent. Directly comparing admiration and benign envy, Van de Ven et al. (2011b) found that benign envy led to higher motivation and performance than admiration. Nevertheless, when describing an episode of admiration, people often spontaneously express their wish to emulate the superior other (Algoe & Haidt, 2009). Similarly, people’s self-reported admiration predicts their tendency to wish and strive for similar, excellent accomplishments of another person (Schindler, Paech, & Löwenbrück, 2015). Furthermore, admiration at the intergroup-level predicts the desire to learn from a superior outgroup (Onu, Smith, & Kessler, 2015). Lastly, in multiple regression analyses by Van de Ven (2017), both benign envy and admiration were simultaneous predictors of upward motivation when recalling a comparison with someone who was better off. Taken together, these results corroborate that admiration can entail upward motivation. In addition, the findings of Van de

Ven (2017) suggest that benign envy and admiration may represent independent pathways to self-improvement.

How does upward motivation in admiration and benign envy differ?

Even though admiration and benign envy are experienced as strikingly different emotions in terms of their valence, they occur in highly similar situations and both seem to motivate for the better. These characteristics pose the intriguing question of how upward motivation in admiration and benign envy differ. How is feeling fine or feeling pain about excellent others reflected in motivation? In line with other scholars speculating about the discrepancies in earlier findings (e.g., Schindler, 2019; Van de Ven, 2017), we argue that the upward motivation that characterizes admiration and benign envy differs in the level of construal. We predict that admiration entails emulative tendencies that motivate people to pursue excellence more generally and in the long-term, whereas the motivation in benign envy is focused at attaining the specific advantage of the superior other in the short term.

The level of concreteness versus abstractness of goals is a basic variable in theories on motivation. Goals can be differentiated in a hierarchy of abstraction (Carver & Scheier, 1998; Kruglanski et al., 2002; Trope & Liberman, 2003; Vallacher & Wegner, 1987) in which subordinate goals (e.g., to pass an exam) contribute to attaining superordinate goals (e.g., to get a degree). Consequently, the same goal-directed action can be construed at a very concrete level of motivation (e.g., to finish a marathon at a certain place and time with a specific performance goal) or a more abstract level of motivation (e.g., to be an excellent athlete). A rich body of evidence shows that the level of goal construal has important consequences for decision-making and behavior. On the one hand, having and setting challenging, specific goals boosts effort and is a major predictor of higher performance (Locke & Latham, 2002) as is having concrete implementation intentions (Gollwitzer & Sheeran, 2006). On the other hand, focusing on superordinate goals may benefit goal-pursuit when facing temptations (Fujita,

Trope, Liberman, & Levin-Sagi, 2006), by providing meaning, and by helping to maintain motivation in the long-term and across different contexts (for a review, see Höchli, Brügger, & Messner, 2018).

Investigations of the relationship of emotion and goal construal have mainly focused on the role of general affect. Research originating from Mood-as-Information Theory (Schwarz & Clore, 1983) suggests that positive affect (signaling that things are going well) promotes abstract construal and a focus on future opportunities. In contrast, negative affect (signaling threat) promotes concrete construal and fuels efforts to overcome proximal problems (Fishbach & Labroo, 2007; Gasper & Clore, 2002; Labroo & Patrick, 2009). These findings also resonate with the reasoning of the Broaden-and-Build Theory of Positive Emotions (Fredrickson, 2004) positing that, in contrast to negative emotions, positive emotions extend people's repertoire of thought and action. Specific emotions may also affect construal level beyond valence differences. For example, research on the negative emotions of guilt and shame supports that the local versus global appraisals within these emotions translate to concrete versus abstract construal, respectively (Han, Duhachek, & Agrawal, 2014).

Several distinguishing features in the appraisals of admiration and benign envy suggest that emulative goal pursuit in these emotions might have different qualities. Their difference in valence implies that admiration is elicited by social comparisons that are not a threat to self-evaluation—in contrast to social comparisons that elicit envy. Summarizing the literature, Schindler et al. (2013) point out that perceiving other's greatness in domains that are highly important to the self is a precondition for admiration to occur. They posit, however, that admiration is elicited by superior others who represent ideals and values that are self-relevant in an abstract, over-arching way. At the same time, their excellence does not seem to carry implications for admirers' immediate goal pursuit. Schindler (2019) argues that psychological

distance from the other may be a requirement for admiration, observing that we often admire people from the past, remote places, or even fiction.

Several findings are in line with the notion that social comparisons in admiration carry less immediate consequences for the self than those in benign envy. Van de Ven et al. (2009) found that episodes of admiration were characterized by lower domain relevance than those of benign (and malicious) envy. Furthermore, whereas admiration mostly involved others who were dissimilar to the self, the two forms of envy almost always involved others who were highly similar to the self. Finally, when describing episodes of admiration, people only very seldom mentioned spontaneously that they directly compared themselves to the admired person at all. In contrast, such explicit comparisons were present in almost all descriptions of benign and malicious envy (Crusius & Lange, 2014; Van de Ven et al., 2009). These findings underline that admiration may rest on more indirect comparisons situated on a more abstract level, whereas envious comparisons carry direct and concrete implications for perceivers' goal pursuit.

Research on benign and malicious envy has identified perceived control as an important appraisal dimension that determines how an episode of envy unfolds. Believing that one has high control over efforts to improve contributes to benign rather than malicious envy (Lange, Crusius, & Hagemeyer, 2016; Van de Ven, Zeelenberg, & Pieters, 2012). Differences in control potential might also be related to differences in motivation between benign envy and admiration. Admiration is mostly caused by comparisons with others whose successes seem unattainable (Van de Ven et al., 2011b, 2012; but see Onu et al., 2016, 2015). For example, comparing emotional episodes, Van de Ven et al. (2012) found higher perceived control for benign envy compared to admiration. Thus, benign envy might involve appraisals of control promoting immediate goal pursuit. In contrast, admiration's function may lie in affirming

abstract goals and values, leading to emulative self-expansion and goal-fulfillment that is possible in the more distant future (Schindler et al., 2015).

Our reasoning that admiration involves more abstract goals than benign envy also echoes Van de Ven's (2017) observation that differences in measurement may have contributed to inconsistencies in prior research. Van de Ven noted that his own earlier research—which did not find a motivating effect of admiration (Van de Ven et al., 2011b)—used dependent variables tailored specifically to the comparison domain (e.g. intended study time, actual performance in an achievement task). In contrast, Schindler et al. (2015)—who found that admiration predicted upward motivation—used more abstract and long-term oriented motivation items such as “I hope to someday attain something similarly special as he/she.” Relatedly, Algoe and Haidt (2009) found that admiration toward a sports superstar increased the self-reported motivation measured in a broad range of domains abstractly including the comparative domain (engaging in physical activity) but also other domains that were independent from the admired other (e.g., academic achievement). Thus, prior research identifying upward motivation in admiration has used dependent variables that measured such motivation abstractly. In contrast, research showing more motivation for benign envy used upward motivation measures on a very concrete level.

In summary, several characteristics of admiration and benign envy suggest that they involve qualitatively different emulative tendencies. Admiring upward comparisons seem to have more general and less immediate influence on the self than those that underlie benign envy. Furthermore, these differences map on central appraisal differences between these emotions. Finally, they align with methodological differences in past research. For these reasons, we predict that upward motivation in admiration is oriented toward abstract goals, whereas benign envy involves the motivation to attain the superior other's outcome concretely.

Furthermore, these construal level differences may translate into the temporal characteristics of these goals such that admiration goals are more long-term oriented than benign envy goals.

The current research

We conducted two studies investigating how upward motivation in admiration and envy differs. In both studies, participants recalled recent episodes of admiration and envy, and listed personal goals elicited in these situations. They then rated their motivation and goals on abstractness and temporal orientation. Furthermore, blinded external raters coded the abstractness versus concreteness of the reported goal content.

Both studies also assessed general improvement motivation with a scale used by Van de Ven et al. (2017) to allow relating them to these prior results. Furthermore, we included measures of pain about inferiority or general affect to assess valence differences between the emotions. As outlined above, positive versus negative affect is not only a defining difference in the experience of admiration versus envy. It also reflects fundamental appraisal differences determining whether upward comparison signifies an opportunity to bask in the glory of superior others (in the case of admiration) or threatened social status (in the case of envy). If these differences drive the diverging motivational consequences of these emotions, valence should mediate the differences in goal construal.

Our focal prediction was that admiration would elicit more abstract, long-term oriented goals than benign envy, which we expected to be focused on attaining the very advantage of the superior other in the short term. We also predicted that the broader motivation in admiration than in benign envy would be reflected in a higher number of goals elicited by the respective emotional episodes. We report all studies we conducted in this line of research. The complete materials, data, analysis scripts, and preregistration of Study 2 are available at https://osf.io/p64ak/?view_only=37b356674cae49208123f989d50529ba.

Study 1

Method

Participants. Within feasibility constraints for conducting the laboratory study and coding open-ended participant responses, we aimed for a sample size of about 100 participants per condition. This corresponds to achieving 80% power for $d = 0.40$ at $\alpha = .05$ (two-tailed) and a combination of two medium-sized effects in mediation analyses (Fritz & MacKinnon, 2007). We intentionally oversampled to account for pre-specified exclusion criteria. Two hundred and twenty-four undergraduate students from different majors of a large German university participated in exchange for coffee vouchers or chocolate.

As determined a priori, we excluded 22 participants who indicated that we should not use their data based on the screening questions by Meade and Craig (2012). Furthermore, we excluded 6 participants who could not recall an episode of the required emotion (3 for admiration, 3 for benign envy) and 3 participants who reported other emotions than envy or admiration (2 for admiration, 1 for benign envy). The final sample comprised 193 participants (153 female, 39 male, 1 other, $M_{\text{age}} = 23.39$, $SD = 4.16$, range 17-40).

Procedure and Measures. We invited participants to the laboratory for a study about “Emotion and motivation” and randomly assigned them to recall a recent episode of either admiration or benign envy. Using the procedure of the Relived Emotion Task (Levenson, Carstensen, Friesen, & Ekman, 1991; Roseman, Wiest, & Swartz, 1994), we asked participants to recall and re-experience a specific, intense emotional episode. We specified that they should recall an episode that had occurred within the last three months. In the admiration condition ($n = 99$), participants should recall an emotional experience in which they “admired another person” (translated from German). In the benign envy condition ($n = 94$), we instead used the German verb “beneiden” denoting episodes of benign envy. Thus, the instruction asked for an episode in which they “benignly envied another person.” This procedure reliably elicits

episodes of admiration and benign envy distinct from the neighboring malicious envy (Crusius & Lange, 2014, supplementary data; also see Lange, Weidman, & Crusius, 2018). We instructed participants to close their eyes and vividly recall what had happened to create a re-experience of the emotion that is as authentic as possible. They should consider what triggered the episode and how it felt when it was most intense. Then, we asked them to describe the episode in writing, focusing on the most important details as if telling a friend.

We also assessed the intensity of the emotional episode (1 = *not at all intense*, 7 = *very intense*), and how long ago the episode took place (1 = *1–2 weeks*, 2 = *2–4 weeks*, 3 = *4–6 weeks*, 4 = *6–8 weeks*, 5 = *8–10 weeks*, 6 = *10–12 weeks*, 7 = *more than 12 weeks*). Emotional intensity has been found to reduce perceived distance (Van Boven, Kane, McGraw, & Dale, 2010). Furthermore, emotional episodes from a more distant past should be construed at a more abstract level (Trope & Liberman, 2003). For these reasons, we planned to use these variables as covariates if episodes of admiration or envy differed on them.

General motivation and affect. To measure general improvement motivation, we translated Van de Ven's (2017) four "move-up" items: "I wanted to have X as well", "I felt inspired to get X myself", "I thought about what it would be like to have X", and "I wanted to put in effort to obtain X as well" (1 = *not at all*, 6 = *very much*, $\alpha = .66$). Depending on the condition, we explained that "X" referred to what they admired or benignly envied the other person for, respectively. We measured pain about inferiority with three items (Lange & Crusius, 2015b): "It hurt not to have X", "That the Person had X and I lacked it elicited strong negative feelings in me", and "It felt frustrating that I did not have X" (1 = *does not apply*, 6 = *applies very much*, $\alpha = .90$).

Goal characteristics. Then, we asked participants which personal goals the episode had elicited in them. They should name as many goals as possible, including those they had already attained in the meantime. As we provided 20 free-form fields, participants could list up to 20

goals. These were then presented in the subsequent pages of the questionnaire in which participants rated the characteristics of each goal. As exploratory measure of goal commitment, they first rated how important the goal was to them on a 7-point-scale (1 = *not at all important* to 7 = *very important*). As the number of goals varied between participants, we assessed internal consistency for this and all subsequent characteristics referring to the listed goals with the Spearman-Brown formula randomly splitting each participants' goal ratings in halves. We averaged this parameter over 1,000 resamples to stabilize the estimate. Internal consistency of the commitment ratings was mediocre, $r = .49$. Mean goal commitment should thus be interpreted with caution.

Next, participants indicated at which point in time they intended to complete their goals (1 = *I already attained my goal*, 2 = *within the next days*, 3 = *within the next weeks*, 4 = *within the next months*, 5 = *within the next years*, 6 = *within the next 5 years*, 7 = *within the next 10 years*, 8 = *in more than 10 years*, $r = .77$). Thereafter, they indicated the concreteness of their goals. We explained that with “concrete goals” we meant goals that refer to specific domains of life, whose sub-tasks are specified, and in which the when and how of goal implementation is formulated. We explained that with “vague goals”, we meant goals about life in general, which are not divided in sub-tasks, and for which the when and how is not formulated explicitly. Participants indicated their answer for each goal on a 7-point scale (1 = *very vague*, 7 = *very concrete*, $r = .67$).

Two independent raters blind to condition and hypotheses also coded the concreteness of the goals using the Specificity Coding Manual by Vincent, Boddana, and MacLeod (2004). The scores cover four levels ranging from 0 (*not concrete*) to 3 (*very concrete*). Goals coded as 0 apply to any life domain, goals coded as 1 apply to a specific life domain but can be divided into sub-tasks, goals coded as 2 apply to a specific life domain and the average person could accomplish the goal without further explanation, and goals coded as 3 additionally include

information about when and how the goals would be realized. The scores of the two raters were reliable, Krippendorff's $\alpha = .72$, and we therefore averaged them. Internal consistency within participants was satisfactory, $r = .73$.

To further investigate whether admiration motivates in a more abstract way whereas benign envy motivates to get exactly the same as the other person, participants responded to items that directly juxtaposed an abstract motivation to improve versus a concrete motivation as the respective end points of one scale. Adapting scale content from Schindler et al. (2015) and Van de Ven et al. (2017), we created the following items: “I wanted to have exactly X as well [vs.] I wanted to have something similar in areas that are important to me”, “I felt inspired to get exactly X myself [vs.] I felt inspired to accomplish something special myself”, “I thought about what it would be like to have exactly X [vs.] I thought about what it would be like to have something similarly special”, and “I wanted to put in effort to obtain exactly X as well [vs.] I wanted to put in effort to obtain similar things in areas that are important to me”. Participants responded to these items on a 4-point scale (1 = concrete statement, 4 = abstract statement; $\alpha = .85$).

Results

Table 1 reports descriptive statistics and test statistics for the univariate analyses. Zero-order correlations of the dependent variables can be found in Table 2. In preliminary analyses, we investigated the potential covariates. The recalled emotional episodes in the admiration and benign envy conditions did not differ significantly in the intensity of the emotional experience nor the time of the emotional episode. Therefore, as decided a priori, we did not control for these variables in the subsequent analyses.¹

¹ As the admiration episodes were marginally more intense than benign envy episodes (see Table 1), we nevertheless repeated the analyses for all dependent variables controlling for intensity. Doing so changed the level of significance of only one finding: The unexpected indirect effect of condition via pain on the number of goals was not statistically significant anymore, $b = -0.32$, $SE = 0.33$, 95% CI[-1.32, 0.01].

Investigating the overall effect on the substantive variables, a MANOVA using Pillai's trace revealed a significant multivariate effect of condition (admiration vs. benign envy) on pain of inferiority, improvement motivation, the concreteness rating by the participants, the external concreteness coding, and the direct concrete versus abstract improvement motivation rating, the number of goals, and intended goal completion time, $V = 0.48$, $F(7, 177) = 23.62$, $p < .001$, $\eta_p^2 = .48$. We followed up by conducting univariate analyses (for test statistics, see Table 1).

Affect. Reflecting the affective difference between the two emotions, admiration was characterized by little pain about being inferior, whereas benign envy was characterized by high levels of pain.

General motivation. General improvement motivation measured with the scale by Van de Ven et al. (2017) was descriptively lower for admiration episodes than for episodes of benign envy. However, this difference was not statistically significant.

Goal construal. Several indicators were in line with the focal hypothesis that admiration elicits more abstract goals than benign envy. When participants rated the abstractness of their goals themselves, this difference was marginally significant. When coded by blinded, external raters, the predicted difference was significant. Furthermore, when participants responded to the items that directly juxtaposed abstract versus concrete goal pursuit, they also indicated higher concreteness versus abstractness for benign envy as compared to admiration. We also expected that admiration would be associated with a later intended goal completion time, which was not supported by the data.

Further goal characteristics. Descriptively, participants in the admiration condition also listed a higher number of goals than participants in the benign envy condition. However,

this difference was not statistically significant. The exploratory analysis of goal commitment showed no differences between admiration and benign envy.

Mediation analyses. Finally, we examined whether pain mediates the motivational effects of envy and admiration. We computed percentile bootstrap confidence intervals of the indirect effects with 5,000 resamples (Hayes, 2018). The analyses revealed an indirect effect of condition via pain on improvement motivation, such that the admiration condition compared to the envy condition led to less pain, which itself was positively related to higher improvement motivation, $b = -0.33$, $SE = 0.15$, 95% CI[-0.63, -0.05]. Furthermore, there was an indirect effect of condition via pain on the direct concrete versus abstract rating, such that the admiration condition compared to the envy condition led to less pain, and higher pain was related to more concrete goals, $b = 0.50$, $SE = 0.14$, 95% CI [0.25, 0.79]. Contrary to expectations, we found no indirect effects for self-rated goal concreteness, $b = -.14$, $SE = 0.21$, 95% CI [-0.55, 0.29], externally rated goal concreteness, $b = -0.10$, $SE = 0.09$, 95% CI[-0.26, 0.08], nor intended goal completion time, $b = 0.31$, $SE = 0.21$, 95% CI[-0.07, 0.75]. There was an indirect effect of condition via pain on the number of goals that was in opposing direction to our prediction. In particular, the admiration condition compared to the benign envy condition led to less pain, however, higher pain predicted a higher number of listed goals, $b = -0.72$, $SE = 0.30$, 95% CI[-1.34, -0.15].

Discussion

This study compared the goals elicited by episodes of admiration and benign envy. As predicted, admiration goals were more abstract than benign envy goals. Particularly, this difference emerged when the concreteness of participants' free response goal content was rated by blinded, external raters. The effect was marginally significant when participants themselves rated the concreteness of their individual goals. Possibly, when participants rated the goals they had listed, they calibrated the scale meaning within the range of their own goals, resulting in

higher variability. When participants instead responded to items that directly compared whether they wanted to emulate exactly what the superior other had or wanted to achieve something similarly special in a more abstract way, benign envy was rated as more concrete.

Analyses of indirect effects were only partly in line with the prediction that lower pain about inferiority in admiration than in benign envy mediated the effect of the emotional episode on more abstract motivation. This indirect effect was evident only for the direct concrete versus abstract goal rating. Notably, however, the study's power to detect mediation effects was limited.

General improvement motivation assessed by the scale by Van de Ven et al. (2017) did not differ significantly between admiration and benign envy. Notably, the emulative goal content of this measure is phrased at a fairly concrete level: For example, one item is "I wanted to have X as well", with X referring to the superior outcome of the other. Based on our reasoning, one might still expect a difference on this measure. One explanation might be that the "X" can be construed on an abstract versus concrete level as well. Indeed, our additional scale that disambiguates the meaning of "X" by juxtaposing concrete versus abstract goals showed a strong difference between admiration and benign envy. Another explanation might be that a more highly powered study is needed to show a weaker effect on the general improvement motivation measure. This reasoning is also supported by the finding that pain about inferiority predicted more improvement motivation, resulting in an indirect effect of admiration versus benign envy via pain on this measure.

Contrary to expectations, we did not find that participants in the admiration condition reported more goals than those in the benign envy condition. Furthermore, there was an indirect effect such that admiration involved less pain about inferiority mediating a lower number of goals. This finding suggests that the relationship of the emotions with the number of goals

might be more complex. For example, the pain in benign envy might cause people to create a larger number of concrete sub-goals as compared to admiration.

Finally, our measure of long-term versus short-term orientation did not show evidence for differences between admiration and benign envy. In hindsight, the phrasing of the measure may have confused people as it asked for intended goal completion time for goals that were elicited when the episode happened, but for a date that could still lie in the future. Thus, participants may have interpreted the starting point of the scale differently (the emotional episode versus the time of the study). We addressed these issues in Study 2.

Study 2

Study 2 had several goals. First, we extended the research by including a condition in which participants recalled an episode of malicious envy. Malicious envy is also based on self-relevant, explicit social comparisons and is similarly self-threatening and painful as benign envy. However, it is characterized by qualitatively different emotional appraisals and motivational tendencies. Compared to benign envy, malicious envy primarily rests on the appraisal that the superior other's advantage is undeserved as well as that perceived control to attain this advantage is low. Furthermore, in contrast to benign envy, malicious envy involves hostile motivation aimed at reducing the status of the superior other (Crusius et al., 2020; Crusius & Lange, 2014; Lange, Weidman, & Crusius, 2018; Van de Ven et al., 2009, 2012).

Thus, including a malicious envy condition allows to differentiate the motivations and their specificity beyond valence in more detail between the three emotions. To complement the range of motivations we added a measure for hostile motivation (Van de Ven, 2017). Furthermore, we added a measure for motivation to affiliate with the superior other (Schindler et al., 2015), which should be higher for admiration than benign envy and malicious envy, but even lower in malicious envy when compared to benign envy.

Apart from adding another experimental condition, we increased overall statistical power by raising the sample size to 150 participants per condition before exclusions, compromising with feasibility constraints to allow external coding of goal content. To address the methodological ambiguity of our prior measure of temporal goal orientation, we instead directly asked participants for each goal whether they considered it to be a short-term versus a long-term goal. To reduce participant strain, we dropped the self-rating of goal concreteness.

We pre-registered our hypotheses, methods, and analysis plan:

https://osf.io/p64ak/?view_only=37b356674cae49208123f989d50529ba

Method

Participants. We conducted the study on Amazon Mechanical Turk (MTurk) setting a sample size of 450. In total, 454 MTurk workers completed the study. We included all data points that matched our pre-registered criteria. To do so, we excluded 12 participants who indicated that we should not use their data (Meade & Craig, 2012). Additionally, we excluded 5 participants because they did not describe any emotional episode (2 in the admiration condition, 2 in the benign envy condition, 1 in the malicious envy condition). Furthermore, we excluded 21 participants, who did not describe episodes in which they experienced admiration or envy (13 in the admiration, 5 in the benign envy condition, 3 in the malicious envy condition). The final sample comprised 416 participants (220 female, 192 male, 4 other, $M_{\text{age}} = 36.27$, $SD = 10.72$, range 19-70).

Procedure. We invited participants to a study about “Emotion and motivation”. The procedure was similar to Study 1. Participants first recalled a recent emotional situation of admiration, benign envy, or malicious envy using the Relived Emotion Task as in Study 1. In the admiration condition, we asked them to recall a situation in which they felt “admiration”. In the benign envy condition, we asked participants to recall a situation in which they felt “envy” and in which the envied person's advantage was “deserved”. In the malicious envy condition,

we asked participants to recall a situation in which they felt envy and in which the envied person's advantage was “undeserved”. As benign envy is characterized by appraisals of high deservingness whereas malicious envy is characterized by appraisals of low deservingness (Van de Ven et al., 2009, 2012), this procedure can be used to elicit corresponding emotional episodes (Lange & Crusius, 2015b).

Measures. To be able to control for the intensity of the experienced emotion and the time that expired between situation and measurement we asked participants to rate the intensity of the experience and how long ago it had happened as in Study 1.

Motivation and affect. The improvement motivation items were the same as in Study 1 ($\alpha = .81$). To measure hostile motivation, we used the “pull-down” items from Ven et al. (2017): “I felt cold towards the other”, “I secretly wanted the other to fail in something”, “I had negative thoughts about the other”, and “I wanted the other to not have X anymore” (1 = *not at all*, 6 = *very much so*; $\alpha = .95$). We measured motivation to affiliate with the other with the items by Schindler et al. (2015): “I sincerely praised the other for the accomplishment (to the person or to others)”, “I wanted to be close to the other”, “I thought the other was a role model”, and “I wanted to be more like the other person in general” (1 = *not at all*, 7 = *very much so*, $\alpha = .93$).

We measured pleasantness and activation using a 5-point scale (1 = *not at all*, 5 = *extremely*) from Barrett and Russell (1998). To calculate pleasantness ($\alpha = .95$) we subtracted the mean of the unpleasant items (“miserable”, “troubled”, “unhappy”) from the mean of the pleasant items (“happy”, “pleased”, “content”). To calculate activation ($\alpha = .56$) we subtracted the mean of the deactivation items (“sleepy”, “still”, “quiet”) from the mean of the activation items (“aroused”, “alert”, “hyperactivated”).

Goal characteristics. As in Study 1, we asked participants to list up to 20 personal goals elicited by the episode and subsequently rate their goal commitment. We again assessed internal consistency with the Spearman-Brown formula for random split halves, aggregating over 1,000 resamples. Internal consistency of the commitment ratings was satisfactory, $r = .67$.

Next, participants indicated whether each of their goals was a short-term or a long-term goal (1 = *short-term*, 7 = *long-term*; $r = .68$). The concreteness of each goal was again scored by two external, blinded raters whose agreement was satisfactory, Krippendorff's α for ordinal data = .60. Internal consistency of these concreteness ratings was also satisfactory, $r = .71$. As in Study 1, participants further completed items contrasting a concrete to an abstract improvement motivation ($\alpha = .92$).

Results

Descriptive statistics and omnibus univariate tests are listed in Table 3. Zero-order correlations of the dependent variables can be found in Table 4. A preliminary, omnibus ANOVA showed significant differences between conditions (admiration vs. benign envy vs. malicious envy) for the intensity of recalled emotion and the time of the emotional situation. Participants reported that episodes of malicious envy were somewhat less intense and occurred longer ago than episodes of admiration and benign envy. Admiration and benign envy did not differ from each other. As preregistered, the following analyses will control for intensity and time of the recalled situation.²

For the main analysis, we first conducted a MANCOVA using Pillai's trace with condition (admiration vs. benign envy vs. malicious envy) as factor and the substantive dependent variables pleasantness, improvement motivation, hostile motivation, affiliation, external goal-concreteness coding, specific vs. abstract improvement motivation, short- vs.

² Repeating all analyses without these covariates changed only one preregistered analysis: When not including the covariates, the unpredicted difference in pleasantness for benign and malicious envy was not significant anymore, $F(1, 413) = 2.03$, $p = .155$, $\eta_p^2 = .005$.

long-term goal orientation, and number of goals, controlling for intensity and the time of the emotional situation. The analysis revealed a multivariate effect of condition on the dependent variables, $V = 0.73$, $F(16, 802) = 29.04$, $p < .001$, $\eta_p^2 = .37$. Furthermore, the intensity of the emotional episode was a statistically significant covariate, $V = 0.18$, $F(8, 400) = 10.80$, $p < .001$, $\eta_p^2 = .18$, whereas time of the episode was not, $V = 0.18$, $F(8, 400) = 0.86$, $p = .55$, $\eta_p^2 = .02$.

We calculated follow-up ANCOVAs of condition (benign envy vs. admiration vs. malicious envy) for all DVs, again controlling for the influence of intensity and time of the emotional situation. We conducted confirmatory analyses via planned contrasts. For exploratory purposes, we also report Bonferroni-adjusted post-hoc tests between conditions for all dependent variables (see Table 3).

Affect. The valence of the emotional episodes in the three conditions differed in line with the conceptualizations of the emotions: The preregistered contrast comparing admiration with benign envy and malicious envy confirmed that it was experienced as a more pleasant emotion, $F(1, 411) = 509.79$, $p < .001$, $\eta_p^2 = .554$. Contrary to prediction, the contrast comparing benign envy and malicious envy was also significant, indicating that malicious envy was somewhat less pleasant than benign envy—the effect was small, however, $F(1, 411) = 3.98$, $p = .047$, $\eta_p^2 = .01$. Exploratory analyses suggested differences in activation, with participants reporting to feel more activated in episodes of admiration than in benign envy and malicious envy.

General motivations. An ANCOVA on improvement motivation revealed an effect of condition. In line with its conceptualization, improvement motivation was highest for benign envy. Planned contrasts confirmed that admiration was associated with less improvement motivation than benign envy, $F(1, 411) = 11.64$, $p < .001$, $\eta_p^2 = .028$. Counter to the

preregistered prediction, improvement motivation was not lower when comparing malicious envy to benign envy and admiration simultaneously, $F(1, 411) = 0.37, p = .546, \eta_p^2 = .001$, because participants in the malicious envy condition showed similar levels of improvement motivation as participants in the admiration condition. We additionally tested the theoretically and empirically established difference that benign envy involves higher improvement motivation than malicious envy. The corresponding, conceptually more focused (but not preregistered) contrast comparing benign and malicious envy was significant, $F(1, 411) = 5.54, p = .021, \eta_p^2 = .013$.

There was also an effect of condition on hostile motivation. A planned contrast confirmed that malicious envy elicited more hostile motivation than benign envy and admiration, $F(1, 411) = 208.01, p < .001, \eta_p^2 = .336$. Bonferroni-adjusted post-hoc tests further showed that admiration elicited less hostile motivation than benign envy which in turn elicited less hostile motivation than malicious envy.

Finally, there was a significant effect of condition on motivation to affiliate. Planned contrasts confirmed that the motivation to affiliate was higher for admiration than both benign envy and malicious envy, $F(1, 411) = 340.91, p < .001, \eta_p^2 = .453$, and higher for benign envy than for malicious envy, $F(1, 411) = 60.76, p < .001, \eta_p^2 = .129$.

Goal construal. Our focal predictions concerned several indicators of goal construal. First, the external coding for goal concreteness differed between conditions. As predicted, a contrast comparing admiration and benign envy showed that admiration goals were less concrete than benign envy goals, $F(1, 407) = 13.99, p < .001, \eta_p^2 = .033$. Parallel findings also emerged when participants rated concreteness versus abstractness of their upward goals resulting in the predicted contrast comparing admiration and benign envy, $F(1, 411) = 10.65, p < .001, \eta_p^2 = .025$. Finally, there was also a significant difference for participants' temporal

goal orientation. In line with the predicted contrast, admiration was associated with more long-term goals than benign envy, $F(1, 407) = 21.79, p < .001, \eta_p^2 = .051$.

Further goal characteristics. Contrary to predictions, the number of goals did not differ between conditions. In particular, the preregistered contrast comparing admiration and the benign envy condition was not significant, $F(1, 411) = 0.51, p = 0.474, \eta_p^2 = .001$. The exploratory variable goal commitment did also not differ between conditions.

Mediation analyses. We further investigated whether pleasantness mediated the construal differences between admiration and benign envy. To do so, we regressed the goal construal variables on a contrast-coded condition variable (admiration = 1, benign envy = -1, admiration = 0). We computed percentile bootstrap confidence intervals of the indirect effects with 5,000 resamples. As predicted, there was an indirect effect of condition via pleasantness on externally rated goal concreteness, such that admiration compared to benign envy predicted higher pleasantness which was associated with less concrete goals, $b = -0.07, SE = 0.03, 95\% CI[-0.12, -0.01]$. In parallel, there was an indirect effect of condition via pain on self-reported concreteness versus abstractness, such that admiration compared to benign envy predicted higher pleasantness which was associated with more abstract goals, $b = 0.14, SE = 0.05, 95\% CI[0.05, 0.24]$. This pattern also emerged for short versus long-term goal orientation, with admiration versus benign envy predicting higher pleasantness, itself being associated with more long-term goals, $b = 0.22, SE = 0.07, 95\% CI[0.06, 0.36]$. Contrary to prediction, the effect of condition on general improvement motivation was not mediated by pleasantness, $b = -0.01, SE = 0.05, 95\% CI[-0.11, 0.08]$. We also explored the indirect effect of condition via pleasantness on the number of goals, which was not significant, $b = 0, SE = 0.13, 95\% CI[-0.24, 0.27]$.

Discussion

The goal of Study 2 was to replicate and extend Study 1 by increasing statistical power, by comparing admiration and benign envy to malicious envy, and by expanding the coverage of

the motivations elicited by the three emotions. Our findings support the predicted affective and motivational qualities. Specifically, admiration was experienced as an affectively positive emotion, whereas benign and malicious envy were experienced as negative emotions. In line with functional accounts, admiration was most strongly associated with affiliative motivation, and malicious envy with hostile motivation.

Crucially, there was also converging evidence that admiration was associated with more abstract goal construal than benign envy. In particular, when blinded, external raters coded the content of participants' verbal goal descriptions, the goals were more abstract when elicited in admiration episodes than when elicited in benign envy episodes. In parallel, when we asked participants to indicate whether they wanted to attain something similarly excellent on an abstract level versus the concrete superior outcome of the other person, participants in the admiration condition leaned toward more abstract goals than participants in the benign envy condition. This difference was also reflected in participants' temporal orientation. Participants in the admiration condition considered their goals to be more strongly oriented toward the long-term than participants in the benign envy condition. Finally, in line with the notion that these effects are tied to affect, we found that pleasantness mediated the differences of admiration and benign envy in construal and temporal orientation.

These effects remained unaffected by the episodes' intensity and how long ago they had taken place. Furthermore, participants reported to be similarly committed to admiration and envy goals. As in Study 1, we found no direct effect and this time also no indirect effect of condition on the number of listed goals. On the one hand, our findings might be in line with the interpretation that, in the benign envy condition, participants did not list a lower number of goals but listed more subordinate goals than those in the admiration condition. Our instruction to "list as many goals as possible" may also have blurred condition differences.

General Discussion

Sometimes, admiration and envy both seem to motivate emulation and upward goal striving. How they do so has been the matter of considerable debate and is one of the most puzzling questions in research on admiration and envy. As a solution, we proposed that the goals that admiration and envy elicit differ in concreteness and temporal orientation. This reasoning is supported by converging evidence of two studies. In Study 1, participants recalled episodes of admiration or benign envy and listed goals that were elicited by them. External ratings of these goals by blinded raters as well as self-report ratings support that the goals in admiration are more abstract than those in benign envy. Study 2 complemented these findings by placing them in the context of the different motivations involved in admiration, benign envy, and, additionally, malicious envy. In line with their conceptualizations, the motivation to affiliate with the superior other was strongest for admiration and lowest for malicious envy. For the hostile motivation to harm the other's position, the reverse pattern emerged. As in Study 1, the goals elicited by episodes of admiration were more abstract than those of benign envy. Furthermore, admiration goals were oriented toward the long-term compared to benign envy goals which were oriented more toward the short term. Finally, analyses of indirect effects suggested that these differences are tied to more positive valence in admiration than in benign envy which predicted more abstract goal construal and long-term orientation.

The findings contribute to the debate about the nature of admiration and envy. They suggest that instead of asking whether admiration or envy is the better motivator, it might be more fruitful to ask how and when they motivate emulative behavior and efforts to do better. Methodologically, our finding that admiration goals are more abstract than benign envy goals also offers an explanation for inconsistencies in previous research. As previous studies about admiration often used broad motivation measures, they were likely to find emulative motivation. Similarly, the often very concrete measures of motivation, effort, and performance

used in research on (benign) envy may have been also likely to find evidence for upward motivation that may have even surpassed upward motivation in admiration (also see Van de Ven, 2017).

The current experiments support that recalling episodes of admiration versus benign envy elicits goals that differ in abstractness. Thus, they are in line with the notion that the goals that characterize admiration and envy can be distinguished. Future research might investigate whether inducing abstract or concrete goal construal alone may be sufficient to elicit admiration versus benign envy when being confronted with upward comparison standards for these goals.

A methodological strength of the current research is that it investigated a broad, thematically diverse sample of emotion episodes gathered in two cultures and diverse demographics. Furthermore, it combines self-report measures with external codings of goal descriptions provided in open-ended, free-form responses. A worthwhile next step for future research will be to investigate motivational elements and behavioral correlates of admiration and envy longitudinally. Even though benign envy might be a predictor of effort and performance in the short run, admiration may result in tangible outcomes in the long run via self-expansion, by providing meaning, or by bridging goal relevant contexts through higher order construal (Höchli et al., 2018; Schindler et al., 2015).

It might be particularly interesting to investigate interindividual differences in goal construal and the propensity to experience admiration, benign envy, and malicious envy in longitudinal studies. Given that having high-level personal strivings is associated with perceived difficulty, more psychological distress, and depressive symptoms (Emmons, 1992), and that concrete goals have strong performance benefits (Gollwitzer & Sheeran, 2006; Locke & Latham, 2002), it seems clear that a chronic propensity to admire others might alone be

unlikely to predict success and wellbeing. We suspect that, in the long run, a flexible tendency to experience admiration and benign envy might offer the most benefits.

The current studies also pose questions about motivational differences between admiration, benign envy, and malicious envy beyond their concrete versus abstract construal. Even though episodes of malicious envy were strongly characterized by hostile motivation in the ratings, most participants also named upward goals in the open-ended responses. An interesting question is why they do not follow through with their upward goals (e.g., Lange & Crusius, 2015b; Van de Ven et al., 2011b). Apart from hostile goals having higher importance, prior research also suggests that the quality of upward goals is distinct. Interindividual difference research suggests that malicious envy is associated with a motivational focus that seeks to avoid failure whereas benign envy is associated with hope for success (Lange & Crusius, 2015a; Lange et al., 2016). Furthermore, whereas benign envy is associated with an attentional focus on concrete means to improve (Crusius & Lange, 2014) and process-focused goal pursuit (Salerno, Laran, & Janiszewski, 2019), malicious envy involves outcome-focused, effort-independent goal pursuit (Salerno et al., 2019). As admiration goals should also be more focused on the “why” rather than the “how” of pursuing a goal, this distinction might also be relevant in predicting motivational and other psychological outcomes in admiration.

Finally, we may also speculate about applied implications of shaping emotional responses in groups and organizational settings. The current findings suggest that promoting admiration might foster affiliative motivation and broad goal construal. This dovetails with prior evidence that admiration can prompt the desire to learn from superior others (Onu et al., 2015). Ultimately, admiration may yield purpose and creativity by emulating others. The concrete goals in benign envy on the other hand may yield effort and performance in the short term and in the specific domains in which the comparisons take place. Even though benign envy is characterized by less hostility and more affiliative motivation than malicious envy, it is

far from a prosocial emotion. Indeed, rather than promoting to see others as role models, benign envy may often involve seeing others as instrumental means to achieve higher social status (Lange, Paulhus, & Crusius, 2018). Thus, again, neither admiration nor benign envy might be a panacea to improve goal pursuit in competitive contexts.

In conclusion, our research supports the notion that admiration and (benign) envy represent motivationally distinct and complementary reactions to superior others. Whereas admiration is a motivational telescope focusing on the big picture of abstract, high level goals, envy is more akin to a motivational microscope focusing on specific, lower level goals.

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Tables

Table 1

Means, Standard Deviations, and Univariate Test Statistics of the Dependent Variables by Experimental Condition (Admiration vs. Benign Envy) in Study 1

		Admiration	Benign Envy		
	Scale Range and direction	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Test Statistic	Cohen's <i>d</i>
Potential Covariates					
Intensity of emotional episode	1 to 7 (<i>very intense</i>)	5.45 (1.32)	5.12 (1.27)	$t(191) = -1.81, p = .072$	0.25
Time of emotional episode	1 to 7 (<i>> 12 weeks ago</i>)	3.14 (2.01)	3.21 (1.95)	$t(191) = 0.25, p = .803$	0.04
Affect					
Pain about inferiority	1 to 6 (<i>very much</i>)	2.03 (1.25)	4.85 (1.83)	$t(191) = 12.57, p < .001$	1.81
Goal Characteristics					
Number of elicited goals	1 to 20	4.67 (2.24)	4.21 (2.21)	$t(191) = -1.42, p = .158$	0.20
Commitment	1 to 7 (<i>very important</i>)	6.16 (0.76)	5.98 (0.70)	$t(189) = -1.74, p = .084$	0.25
General Motivation					
Improvement	1 to 6 (<i>very much</i>)	4.40 (1.22)	4.62 (1.03)	$t(191) = 1.33, p = .186$	0.19
Goal Construal					
Self-rated concreteness	1 to 7 (<i>very concrete</i>)	4.07 (1.48)	4.44 (1.45)	$t(189) = 1.72, p = .087$	0.25
Externally coded concreteness	0 to 3 (<i>most concrete</i>)	0.88 (0.64)	1.16 (0.60)	$t(189) = 3.16, p = .002$	0.46
Concrete vs. abstract motivation	1 to 4 (<i>most abstract</i>)	2.96 (0.88)	2.57 (0.97)	$t(191) = -2.93, p = .004$	0.42
Intended goal completion time	1 to 7 (<i>>10 years</i>)	3.26 (1.35)	3.20 (1.41)	$t(183) = -0.31, p = .756$	0.05

Note. Differing degrees of freedom result from missing values.

Table 2

Zero-order Correlations for the Measures Included in Study 1

	1	2	3	4	5	6	7	8	9	10
1. Intensity of emotional episode	—									
2. Time of emotional episode	-.04	—								
3. Pain about inferiority	.12	.05	—							
4. Number of elicited goals	.16*	-.06	.06	—						
5. Goal commitment	.25**	-.10	-.02	.06	—					
6. Intended goal completion time	-.13	.08	-.10	-.21**	-.01	—				
7. Improvement motivation	.06	-.02	.18*	.04	.14*	-.06	—			
8. Self-rated goal concreteness	.10	-.03	.12	-.06	.18*	-.07	.18*	—		
9. Externally coded goal concreteness	.02	.10	.21**	-.15*	-.15*	.11	.14	.37**	—	
10. Concrete vs. abstract motivation	.01	-.08	-.36**	-.04	.06	.09	-.20**	-.09	-.09	—

Note. * $p < .05$, ** $p < .01$

Table 3

Means, Standard Deviations, and Univariate Test Statistics of the Dependent Variables by Experimental Condition (Admiration vs. Benign Envy vs. Malicious Envy) in Study 2

	Scale Range and Direction	Admiration	Benign Envy <i>M (SD)</i>	Malicious Envy	Univariate, Omnibus Test Statistic	η_p^2
Potential Covariates						
Intensity of emotional episode	1 to 7 (<i>very intense</i>)	5.68 ^a (0.99)	5.46 ^{ab} (1.12)	5.27 ^b (1.32)	$F(2, 413) = 4.15, p = .016$	.020
Time of emotional episode	1 to 7 (<i>> 12 weeks ago</i>)	3.16 ^a (1.93)	3.39 ^a (1.87)	4.00 ^b (1.92)	$F(2, 413) = 7.13, p = .001$	.033
Affect						
Pleasantness	-4 to +4 (<i>pleasant</i>)	2.51 ^a (1.81)	-1.41 ^b (1.93)	-1.71 ^b (1.65)	$F(2, 411) = 255.80, p < .001$	.555
Activation	-4 to +4 (<i>activated</i>)	1.30 ^a (1.24)	0.78 ^b (1.30)	0.78 ^b (1.18)	$F(2, 411) = 5.40, p = .005$	.026
Goal Characteristics						
Number of elicited goals	1 to 20	4.54 ^a (2.70)	4.73 ^a (3.46)	4.45 ^a (3.53)	$F(2, 411) = 0.31, p = .736$	.001
Commitment	1 to 7 (<i>very important</i>)	6.38 ^a (0.89)	6.36 ^a (0.68)	6.18 ^a (0.94)	$F(2, 407) = 1.06, p = .349$	.005
General Motivations						
Improvement		4.71 ^a (1.25)	5.10 ^{bc} (0.82)	4.78 ^{ac} (1.02)	$F(2, 411) = 6.18, p = .002$	.029
Hostility	1 to 6 (<i>very much</i>)	1.17 ^a (0.55)	3.12 ^b (1.65)	4.14 ^c (1.53)	$F(2, 411) = 166.08, p < .001$	.447
Affiliation		5.99 ^a (1.12)	3.66 ^b (1.77)	2.26 ^c (1.44)	$F(2, 411) = 196.87, p < .001$	.489
Goal Construal						
Externally coded concreteness	0 to 3 (<i>most concrete</i>)	1.24 ^a (0.57)	1.50 ^b (0.61)	1.49 ^b (0.58)	$F(2, 407) = 9.07, p < .001$	.043
Concrete vs. abstract motivation	1 to 4 (<i>most abstract</i>)	2.97 ^a (1.03)	2.57 ^b (1.08)	2.55 ^b (0.98)	$F(2, 411) = 7.22, p = .001$	.034
Short- vs. long-term orientation	1 to 7 (<i>long term</i>)	5.29 ^a (1.60)	4.36 ^b (1.66)	4.53 ^b (1.56)	$F(2, 407) = 11.90, p < .001$	.055

Note. We report uncorrected descriptive statistics. The analyses control for intensity and time of the episode, apart from the analyses on these covariates themselves. Condition means that do not share a common superscript are significantly different in Bonferroni-adjusted post-hoc tests. Differing degrees of freedom in the ANCOVAs result from missing values.

Table 4

Zero-order Correlations for the Measures Included in Study 2

	1	2	3	4	5	6	7	8	9	10	11	12
1. Intensity of emotional episode	—											
2. Time of emotional episode	.05	—										
3. Pleasantness	-.12*	-.09	—									
4. Activation	.25**	-.03	.20**	—								
5. Number of elicited goals	.15**	.03	-.04	.04	—							
6. Goal commitment	.30**	-.02	.04	.15**	-.02	—						
7. Improvement motivation	.17**	-.03	-.13*	.25**	.15**	.27**	—					
8. Hostile motivation	.07	.17**	-.67**	-.11*	.03	-.06	-.02	—				
9. Motivation to affiliate	.12*	-.15**	.66**	.17**	.08	.18**	.10*	-.70**	—			
10. Externally coded goal concreteness	.04	-.03	-.20**	.04	-.09	-.03	.08	.08	-.17**	—		
11. Concrete vs. abstract motivation	-.06	-.04	.21**	-.01	-.05	-.01	-.24**	-.09	.11*	-.11*	—	
12. Short vs. long-term orientation	.07	.02	.23**	.03	-.06	.20**	-.03	-.11*	.23**	-.32**	.22**	—

Note. * $p < .05$, ** $p < .01$