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Nonconscious goals can shape what people want to feel*

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Abstract

Goals can determine what people want to feel (e.g., Tamir et al., 2008), but can they do so even when they are primed outside of conscious awareness? In two studies, participants wanted to feel significantly less angry after they were implicitly primed with a collaboration goal, compared to a neutral prime. These effects were found with different implicit priming manipulations, direct and indirect measures of emotional preferences, and when controlling for concurrent emotional experiences. The effects were obtained in social contexts in which the potential for collaboration was relatively higher (Study 1) and lower (Study 2). Also, similar effects were found when collaboration was activated nonconsciously (Studies 1–2) and consciously (Study 2). By showing that nonconscious goals can shape emotional preferences, we demonstrate that what people want to feel can be determined by factors they are unaware of.

Keywords

Emotion regulation; Nonconscious goals; Emotions; Motivation; Anger; Automaticity

Introduction

Emotional preferences depend on the goals people pursue (e.g., Tamir, Mitchell, & Gross, 2008; Tsai, Miao, Seppala, Fung, & Yeung, 2007). For example, people who are motivated to collaborate with another want to decrease their anger (Tamir & Ford, 2012a), possibly in order to avoid scaring or hurting their partner. In contrast, people who are motivated to confront another want to increase their anger (Tamir & Ford, 2012a; Tamir et al., 2008). Emotions, therefore, are regulated not only for the sake of increasing pleasure, but also for the sake of successful goal attainment (see Bonanno, 2001; Tamir, 2009). Goals, however, can operate outside of conscious awareness (for a review, see Dijksterhuis & Aarts, 2010). Therefore, we sought to test whether the emotions people want to feel can also be determined by nonconscious goals.

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Emotions as means for goal pursuit

When goals are activated, people become less motivated to engage in behaviors that impair goal pursuit and more motivated to engage in behaviors that promote it (Ferguson, 2007; Ferguson & Bargh, 2004). For instance, people who want to lose weight may be less motivated to eat ice cream. Goal pursuit is influenced not only by our behaviors but also by our emotions. Anger, for instance, can impair collaboration (e.g., Kopelman, Rosette, & Thompson, 2006; Van Kleef, De Dreu, & Manstead, 2004), lead to contention and disagreement (e.g., Forgas, 1998), and decrease interpersonal trust (Dunn & Schweitzer, 2005). Anger, therefore, impairs the pursuit of collaboration, and so it is reasonable to expect that when collaboration is activated, people may become particularly motivated to decrease their anger.

Consistent with this prediction, participants who were led to collaborate with another had significantly weaker preferences for anger-inducing activities, whereas those led to confront another had significantly stronger preferences for anger-inducing activities, compared to participants in a control condition (Tamir & Ford, 2012a). Engaging in their preferred activities, in turn, led participants who pursued a collaboration goal to feel significantly less angry than others, and as a result, behave more collaboratively in negotiations.

Preferences for anger-inducing activities were fully mediated by the expected usefulness of anger for goal pursuit. The less useful participants expected anger to be, the less they wanted to engage in anger-inducing activities. Additional evidence suggests that such emotional preferences do not result from mere priming effects. Preferences for anger-inducing music following goal priming were contingent upon the expected reward for successful performance (Tamir & Ford, 2012a, 2012b). Participants who were led to confront another wanted to listen to anger-inducing music before the confrontation, but only when they expected high (but not low) personal reward for successful performance. Such findings demonstrate that people are motivated to experience emotions that promote goal achievement and avoid those that impair it (Bonanno, 2001; Parrott, 1993; Tamir, 2009).

Goals, however, can operate outside of conscious awareness (for a review, see Ferguson, Hassin, & Bargh, 2008). For instance, collaboration can be implicitly primed and influence goal-consistent behavior (e.g., Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trotschel, 2001; Kleiman & Hassin, 2011). Nonconscious goals can also change the desirability of behaviors that are useful or harmful for goal pursuit (Ferguson, 2007; Ferguson & Bargh, 2004). To the extent that goals alter the desirability of relevant means, and emotions can serve as means for goal pursuit, might goals change what people want to feel, even when activated outside of conscious awareness? We tested this possibility in the current investigation. We hypothesized that participants implicitly primed with collaboration would be more motivated than others to down-regulate their anger in anticipation of a social interaction.

The current investigation

To test our hypothesis, we activated the goal of collaboration nonconsciously (Studies 1–2) and consciously (Study 2), using two different priming manipulations. To test the generalizability of our hypothesis, in Study 1, collaboration was primed in a context

perceived as more collaborative (i.e., a resource dilemma task; Bargh et al., 2001). In Study 2, collaboration was primed in a context perceived as less collaborative (i.e., an officer interrogating a suspect). In both studies, we assessed emotional experiences following the manipulation to test whether nonconscious goals influence what people feel (Shidlovsky & Hassin, 2011) or, independently, what they want to feel. We predicted that nonconscious collaboration (vs. a neutral prime) would make people want to feel less angry.

Study 1

Participants in Study 1 were randomly assigned to either a collaboration prime condition or a neutral prime condition. In particular, as they prepared for a resource dilemma task, participants were implicitly primed with collaboration (vs. a neutral prime), using a sentence unscrambling task (Srull & Wyer, 1979). We used preferences for music and memories as an indirect index of emotional preferences, because this procedure has been validated in prior research (e.g., Tamir et al., 2008; Tsai et al., 2007). To test whether emotional preferences were driven by concurrent emotional experiences, participants rated such experiences after indicating their emotional preferences. We expected participants in the collaboration (vs. control) condition to be less motivated to experience anger, regardless of their concurrent feelings.

Method

Participants—Sixty-one undergraduate students (63% males; $M_{\text{age}} = 19.48$) participated for course credit or \$10. One participant was familiar with the priming manipulation and was omitted.

Materials

Goal priming—In a Scrambled Sentence Test (Srull & Wyer, 1979), participants arranged four of five words to create 15 grammatically correct sentences. In the collaboration condition, 13 sentences contained one word related to collaboration (e.g., *cooperative*, *helpful*). In the neutral condition, these words were replaced by goal-neutral words (e.g., *city*, *umbrella*). Two sentences were identical across conditions and contained goal-neutral words.

Emotional experiences—Participants rated the extent (0 = *not at all*, 8 = *extremely*) to which they felt *angry* and *irritated* ($\alpha = .85$), *happy* and *joyful* ($\alpha = .85$), and *calm* and *relaxed* ($\alpha = .74$).

Indirect emotional preferences—Following Tamir et al. (2008), participants rated their preferences for music to listen to and events to recall. First, they listened to three 20-second music clips in a random order and rated how much they wanted to listen to similar music before the social task (0 = *not at all*, 8 = *extremely*). Clips included an anger-inducing clip (*Refuse/Resist* by Apocalyptica), a happiness-inducing clip (the opening theme in *Triplets de Belleville*) and a neutral clip (*Indecision* by Yo Yo Ma). Clips were selected based on pilot data ($N = 10$), demonstrating that the angry clip induced more anger ($M = 2.20$) than the other clips ($M_s = 0.00$), $t(9)s > 2.85$, $ps < .019$, and the happy clip induced more happiness (M

= 4.85) than the angry and neutral clips ($M_s = 1.60$ and 2.55 , respectively), $t(9) > 4.83$, $p < .001$. Second, participants rated, in a random order, how much they wanted to recall a past event in which they were *happy*, *angry*, or *not emotional*.

Procedure

Participants were told the experiment examined links between memory skills and social behavior. They were told they will be paired with another participant to complete a resource allocation task. Participants were told that before this task they will complete two memory tasks, one involving memorizing words while listening to music and another involving autobiographical recall, and they could indicate their preferences for music and events to recall. Participants were randomly assigned to conditions and completed the goal priming manipulation, presented as a verbal proficiency task. They then selected memories and music. Participants rated their emotional experience and how collaborative and how competitive they intend to be (0 = *not at all*, 8 = *extremely*). Finally, they were informed that their partner failed to arrive, probed for suspicion, and debriefed.

Results and discussion¹

Effects of goal priming on emotional preferences—A repeated-measures ANOVA with Emotion (anger, happiness, neutral) and Activity (memories and music) as within-subject factors and Condition (collaboration vs. neutral) as a between subjects factor yielded a significant Emotion \times Condition interaction, $F(2,56) = 4.09$, $p = .019$, $\eta^2 = .07$. As shown in Fig. 1 and confirmed in tests of simple effects, participants in the collaboration (vs. neutral) condition had weaker preferences for anger-inducing activities, $F(1,57) = 4.37$, $p = .041$, $\eta^2 = .07$. However, there were no significant differences between conditions in preferences for happiness-inducing activities, $F(1,57) = 2.91$, $p = .093$, $\eta^2 = .05$, or neutral, $F < 1.06$.

The interaction qualified a main effect for Emotion, $F(1,57) = 53.80$, $p < .001$, $\eta^2 = .49$, with participants reporting the strongest preferences for happy activities and the weakest for angry activities ($M_s = 4.79$, 3.03 , and 1.92 for happy, neutral, and angry activities). There was also a main effect for activity, $F(1,57) = 6.89$, $p = .011$, $\eta^2 = .11$, such that preferences were stronger for memories than music ($M_s = 3.56$ and 2.94 , respectively). Finally, there was an Activity \times Emotion interaction, $F(2,56) = 11.29$, $p < .001$, $\eta^2 = .17$, such that preferences for angry and happy memories ($M_s = 2.28$ and 5.66 , respectively) were higher than preferences for angry and happy music ($M_s = 1.56$ and 3.93 , respectively), whereas the opposite was true for neutral memories and music ($M_s = 2.73$ and 3.33 , respectively). The Activity \times Emotion \times Condition interaction as well as all other effects were not significant, $F_s < 2.42$.

To test whether the manipulation influenced concurrent feelings, we ran a series of one-way ANOVAs with priming condition as the predictor and either concurrent anger, happiness, or calmness as the outcome. No effect was significant, $F_s < 1.12$. The Emotion \times Condition interaction reported above remained significant when concurrent anger, happiness, and

¹Effects were not qualified by gender.

calmness were entered as covariates, $F(2,56) = 3.10$, $p = .049$, $\eta^2 = .05$, and was not qualified. Therefore, our manipulation did not influence what participants felt, but what they wanted to feel.

Probing for suspicion—Participants were unaware of the true purpose of the experiment. They could not identify the purpose of the manipulation or describe a common theme in the priming manipulation. Priming conditions did not differ in self-reported commitment to collaboration or to competition, $F_s < .03$. Results remained unchanged when goal commitment was entered as a covariate in our analyses (see Shidlovsky & Hassin, 2011), indicating that collaboration was nonconsciously activated.

Study 2

We took several steps in Study 2 to establish the generalizability and the validity of our findings. First, to test the generalizability of our findings, we used a different priming procedure. Collaboration was primed using a subliminal priming manipulation that has been shown in prior research to successfully activate goals outside of awareness (e.g., Aarts et al., 2005). In addition, to provide a more conservative test of our hypothesis, we tested our prediction in a context that is somewhat less amenable to collaboration (i.e., an officer interrogating a suspect) compared to the context used in Study 1 (i.e., resource dilemma task).² Second, to test the validity of our priming manipulation, we examined effects of both nonconscious and conscious collaboration (Aarts, Custers, & Holland, 2007; Bargh et al., 2001). In addition, to test the validity of our measures of emotional preferences, in addition to the same behavioral measures that were included in Study 1, participants in Study 2 also rated their emotional preferences directly.

In Study 2, therefore, participants were randomly assigned to either a nonconscious collaboration priming condition, a conscious collaboration priming condition, or a control condition. Following the priming procedure, participants rated their preferences for music and memories, as well as their direct preferences for emotional experiences. We predicted that, as in Study 1, nonconscious and conscious collaboration would similarly decrease preferences for anger.

Method

Participants—Sixty-six undergraduate students (70% females, $M_{\text{age}} = 19.56$) participated for course credit or \$10.

Materials

Implicit priming—The task was adapted from Aarts et al. (2005). Trials began with a fixation cross presented at the center of the screen for 500 ms. Next, a prime word was presented in capital letters for 23 ms (e.g., SUPPORT), followed by a mask of random capital letters for 200 ms (e.g., CBKSLYFH). Finally, participants saw another string of random letters and pressed “y” if it contained a capital letter (e.g., hBskdpuw) and “n” if it

²In a pilot test, participants reported that they were motivated to collaborate in this scenario, but significantly less so ($M = 4.47$ on a 0–8 scale) compared to the scenario used in Study 1 ($M = 6.73$), $t(14) = 2.73$, $p = .016$.

did not. The intertrial interval was 1500 ms. The collaboration condition included 8 prime words related to collaboration (e.g., *share*, *cooperative*). These words were replaced with goal-neutral words (e.g., *window*, *plant*) in the control condition. Each prime word appeared 10 times.

Emotional experiences—Participants rated their emotional experiences, as in Study 1 (α s = .77, .87, and .78, for anger, happiness, and calmness, respectively).

Indirect emotional preferences—Participants rated preferences for music and memories (i.e., indirect preferences). Music clips included four anger-inducing (e.g., *Apocalyptica*, *Inquisition Symphony 2*), four happiness-inducing (e.g., *Jah Hannan*, *Track 8*), and four neutral (e.g., *Radiohead*, *Treefingers*) clips. In pilot data ($N = 10$) angry clips produced more anger than happy and neutral clips (M s = 3.50, .53, and 0.69, respectively), $t(9)$ s > 3.81, p s < .01, and happy clips produced more happiness than angry and neutral clips (M s = 4.47, 2.67, and 2.02, respectively), $t(8)$ s > 3.85, p s < .01. We averaged across preferences for clips with the same emotional tone (α s = .72, .71, and .79 for angry, happy, and neutral clips, respectively). With respect to memories, events varied by emotional tone (i.e., events when one was *happy*, *angry*, or *felt little emotion*) and by content (i.e., *concerning school*, *not concerning school*, *concerning friends*, and *not concerning friends*). We averaged across preferences for memories with the same emotional tone (α s = .88, .91, and .88 for angry, happy, and neutral events, respectively).

Direct emotional preferences—Participants rated how much (0 = *not at all*, 8 = *extremely*) they wanted to experience *anger* and *irritation* ($\alpha = .81$), *happiness* and *cheerfulness* ($\alpha = .78$) and *calmness* and *relaxation* ($\alpha = .79$) before the social interaction.

Procedure

Participants were told the experiment examined cognitive determinants of social performance. They were told they would complete a cognitive task, such as a memory task, or a non-cognitive task, such as listening to music, and they could indicate their preferences for memories and music. They would then play the role of a police officer trying to gather information from an informant, played by another participant, and their performance would be assessed. Participants were randomly assigned to conditions. Participants in the nonconscious collaboration and control conditions completed the implicit priming task. Participants in the conscious collaboration condition were asked to try to be as collaborative as possible. Participants completed the indirect measures of emotional preferences. Because rating memories and music took some time, participants completed the same implicit priming task for a second time and then rated their direct emotional preferences. Participants were then probed for suspicion and debriefed.

Results and discussion¹

Effects of goal priming on indirect emotional preferences—A repeated-measures ANOVA with Emotion (angry, happy, and neutral) and Activity (music and memory) as within-subject factors and Condition (implicit collaboration, explicit collaboration, control) as a between subjects factor yielded a significant Emotion \times Condition interaction, $F(4,61) =$

4.02, $p = .004$, $\eta^2 = .11$ (see Fig. 2). As expected and confirmed in tests of simple effects, conditions varied significantly in preferences for angry activities, $F(2,63) = 3.26$, $p = .045$, $\eta^2 = .09$, but not happy or neutral activities, $F_s < 2.20$. Pair wise comparisons confirmed that participants in the explicit and implicit collaboration conditions had weaker preferences for angry activities compared to participants in the control condition (mean differences = 1.01 and .97, respectively, $p_s < .037$), and marginally stronger preferences for happy activities (mean differences = $-.83$ and $-.90$, $p_s < .08$). There were no significant differences in preferences for neutral activities (mean differences $< .79$, $p_s > .07$). Participants in the explicit and implicit collaboration conditions did not differ in their preferences, $p_s > .73$.³

The interaction above qualified a main effect for Emotion, $F(2,63) = 17.62$, $p < .001$, $\eta^2 = .22$, such that on average, preferences for happiness were higher than those for angry and neutral activities ($M_s = 4.10$, 3.10 , and 2.73 , respectively). There was also a significant Emotion \times Activity interaction, $F(2,63) = 7.58$, $p = .001$, $\eta^2 = .11$, such that preferences for happy memories were higher than those for happy music ($M_s = 4.53$ and 2.67 , respectively). The Activity \times Emotion \times Condition interaction and the other effects were not significant, $F_s < 1$.

To test whether the manipulations influenced concurrent feelings, we ran a series of one-way ANOVAs with condition as the predictor and either concurrent anger, happiness, or calmness as the predicted variables. None of the effects were significant, $F_s < 2.35$. Also, the Emotion \times Condition interaction remained significant when the analyses were repeated with concurrent anger, happiness, and calmness as covariates, $F(4,61) = 10.91$, $p = .025$, $\eta^2 = .09$, and was not further qualified.

Effects of goal priming on direct emotional preferences—Direct and indirect indices of emotional preferences were significantly correlated (see Table 1). A repeated-measures ANOVA, with Emotion (angry, happy, and neutral) as a within-subject factor and Condition (implicit collaboration, explicit collaboration, control) as a between-subjects factor yielded a significant Emotion \times Condition interaction, $F(4,61) = 3.87$, $p = .005$, $\eta^2 = .11$ (see Fig. 3). Conditions differed significantly in preferences for anger, $F(2,63) = 3.13$, $p = .050$, and calmness, $F(2,63) = 5.50$, $p = .006$, but not happiness, $F < 1.67$. Participants in the implicit collaboration condition showed weaker preferences for anger (mean difference = -1.16 , $p = .017$), and stronger preferences for calmness (mean difference = 1.87 , $p = .002$), than those in the neutral condition. Participants in the implicit collaboration condition also showed marginally stronger preferences for happiness (mean difference = 1.16 , $p = .080$). Similar patterns were found among participants in the explicit collaboration condition, mean difference = $.80$, $p = .085$, for anger, and mean differences = 1.04 , $p = .06$, for calmness. There were no significant differences between participants in the implicit and explicit collaboration conditions, $p_s > .12$.⁴

The interaction qualified a main effect for Emotion, $F(2,63) = 123.79$, $p < .001$, $\eta^2 = .66$, such that on average, participants reported stronger preferences for happiness and calmness

³This was also confirmed in post-hoc Tukey's comparisons, $p_s > .93$.

⁴This was also confirmed in post-hoc Tukey's comparisons, $p_s > .27$.

than for anger ($M_s = 5.69, 5.33, \text{ and } 1.13$, respectively). The effect remained significant and was not qualified when concurrent emotions were included as covariates in the analysis, $F(4,61) = 3.11, p = .018, \eta^2 = .09$.

Probing for awareness—In this study we used a subliminal priming procedure validated in prior research. Nonetheless, we took conservative measures to ensure that goals were activated nonconsciously. Participants were probed for awareness of the primes in a free recall and a recognition test. In the free recall test, none of the participants recalled words from the priming task. In the recognition test, only one participant correctly recognized 3 words from the task. Results were unchanged when s/he was omitted from the analyses. In a funnel debriefing procedure, none of the participants in the implicit priming conditions were able to identify the purpose of the priming task or the true purpose of the study. Together, this suggests that our implicit manipulation activated collaboration outside of awareness. In the explicit collaboration condition, one participant identified the true purpose of the study. Results were unchanged when s/he was omitted.

General discussion

The present findings demonstrate that what people want to feel can be determined by goals that are activated outside of conscious awareness. In two studies, participants who were nonconsciously primed with collaboration wanted to feel significantly less angry than other participants. This effect occurred in contexts that were relatively more (Study 1) and relatively less (Study 2) collaborative. Effects were replicated with two different implicit priming manipulations, and could not be explained by changes in concurrent emotional experience. The effect of nonconscious collaboration was largely equivalent to that of conscious collaboration (Study 2). As they prepared to interact with another, participants who were nonconsciously primed with collaboration (vs. a neutral prime) selected activities that would make them feel less angry (Studies 1–2) and explicitly expressed a desire to feel less angry (Study 2) before the interaction.

Implications for emotion regulation

The current findings provide further evidence for the instrumental approach to emotion regulation (Bonanno, 2001; Parrott, 1993; Tamir, 2009), demonstrating not only that goals influence what people want to feel, but also that nonconscious goals can do so as well. The current findings also add to the growing evidence for automatic processes in emotion regulation (for reviews, see Koole & Rothermund, 2011; Mauss, Bunge, & Gross, 2007). Implicit processes have been implicated in the initiation of emotion regulation (e.g., Eder, 2011; Mauss, Cook, & Gross, 2007; Schweiger Gallo, Keil, McCulloch, Rockstroh, & Gollwitzer, 2009) and in the selection of emotion regulation strategies (e.g., Williams, Bargh, Nocera, & Gray, 2009). Our findings demonstrate that implicit processes can also be involved in setting the direction of emotion regulation, by shaping what people want to feel. Finally, our findings contribute to research on implicit processes, by showing that even emotional preferences can be shaped by forces outside of conscious awareness. In doing so, our findings may explain why people sometimes want to feel a certain way, without necessarily knowing why they do so. To the extent that nonconscious goals can shape what

people want to feel, when they do so people are unlikely to be aware of the true causes of their emotional preferences.

Future research should examine the mechanism by which nonconscious goals shape emotional preferences. We suggest that preferences for emotions are influenced by goals when emotions serve as means for goal pursuit (Tamir, 2009; Tamir & Gross, 2011). Nonconscious goals should have stronger effects on the desirability of their respective means, the more people are committed to the goal and the more effective people perceive the means to be (e.g., Ferguson & Bargh, 2004). It would be important to test, therefore, whether nonconscious goals influence emotional preferences only when the emotion is perceived to be useful for the respective goal pursuit, and whether the effect is stronger the more useful the emotion is perceived to be. This account might explain, for instance, why in the present studies nonconscious collaboration consistently modified preferences for anger, but not necessarily for happiness. This may be because, on average, people view anger as very harmful for collaboration, but they view happiness as only somewhat useful for it (see Tamir & Ford, 2012b).

Pragmatic implications

Anger can have detrimental implications for social relationships, from intimate relationships to group conflicts. Anger perpetuates disagreements and impairs the chances of conflict resolution (Halperin & Gross, 2011; Halperin, Sharvit, & Gross, 2011; Horowitz, 1985; Petersen, 2002). Decreasing anger, in turn, can have important tangible implications (e.g., Halperin & Gross, 2011; Halperin, Porat, Tamir, & Gross, in press). But to decrease anger, people must first be motivated to do so. Our findings suggest that subtle cues that activate nonconscious goals could potentially motivate people to decrease anger. Indeed, as found in Study 2, implicit goal priming can change preferences for anger even in contexts that are perceived as somewhat less collaborative. It would be interesting to test whether nonconscious goal priming could influence emotional preferences and regulation even in the context of more intense conflicts.

In the present studies, we were able to demonstrate the effects of nonconscious goals on preferences for anger. We did not, however, test subsequent effects on emotional experiences and actual behavior. Past studies have already linked preferences for anger, in particular, to subsequent emotional experience and to behavior (e.g., Tamir & Ford, 2012a; Tamir, Salerno, Rhodes, & Schreier, submitted for publication). One study has also demonstrated that nonconscious goals can influence emotional experiences (Shidlovsky & Hassin, 2011), but it is not yet known whether these effects reflect changes in emotional appraisal or active emotion regulation. It remains to be seen, therefore, whether by changing what people want to feel, nonconscious goals can lead to changes in emotional experience and in subsequent behavior.

Our studies focused on priming collaboration and testing preferences for anger, in particular. Future studies can test whether the current effects extend to other types of goals and emotions. For instance, would people try to increase their anger when primed with the goal of competition or confrontation? If so, such findings could have interesting clinical implications.

The current findings demonstrate that people may not always know why they want to feel a certain way. This could help explain cases in which people seem to resist changing maladaptive emotional experiences, without being able to justify their behavior. For instance, perhaps some people resist attempts to decrease their anger because at an implicit level they do not want to collaborate. By showing that emotional preferences can be determined by nonconscious goals, our findings help explain why people vary in their emotional preferences and why people cannot always justify them.

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HIGHLIGHTS

- People want to feel less angry after implicitly primed with collaboration.
- Emotional preferences can be determined by nonconscious goals.
- People do not necessarily know why they want to feel a certain way.

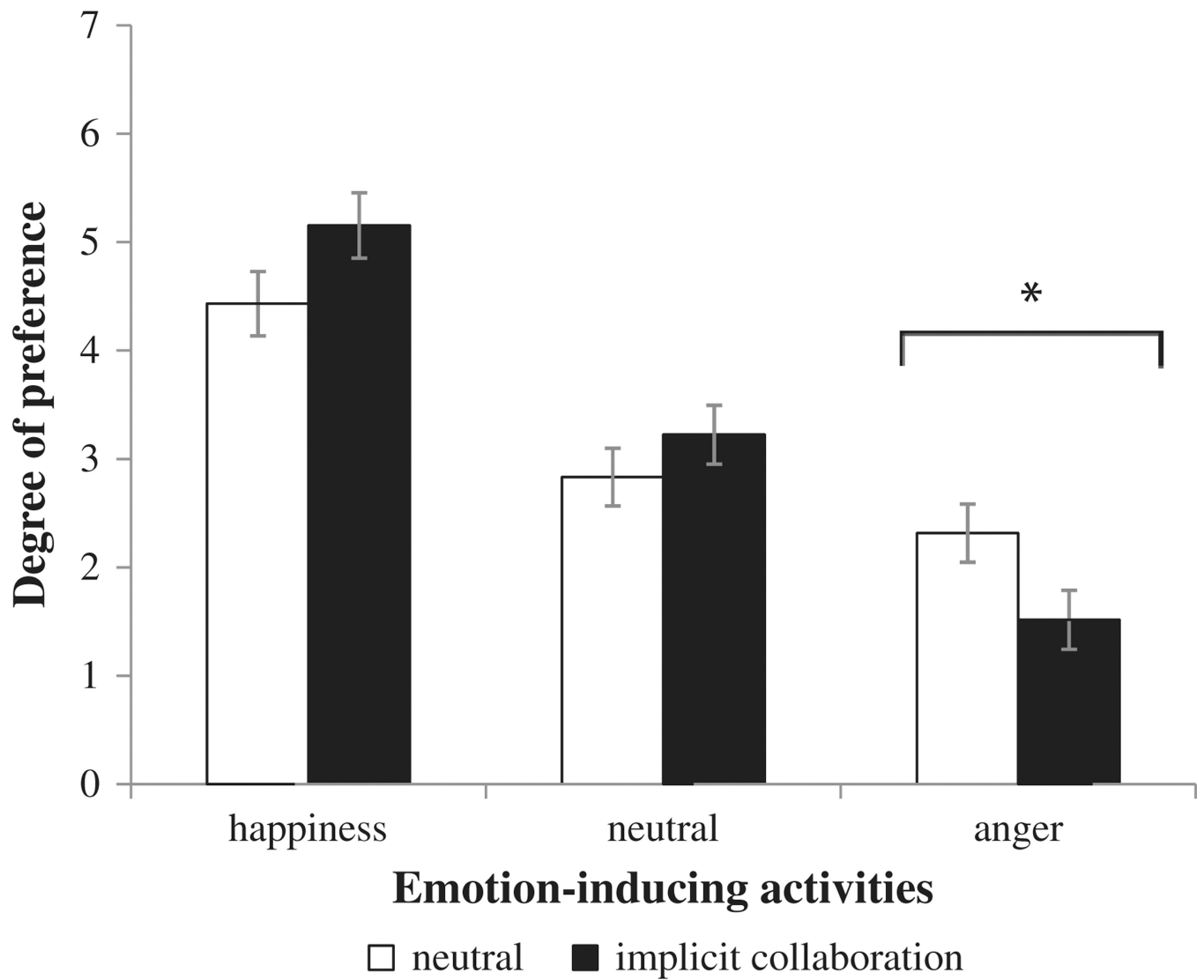


Fig. 1. Indirect preferences for happiness, neutral feelings, and anger, as a function of implicit priming condition (Study 1). Error bars represent ± 1 standard error of the mean.

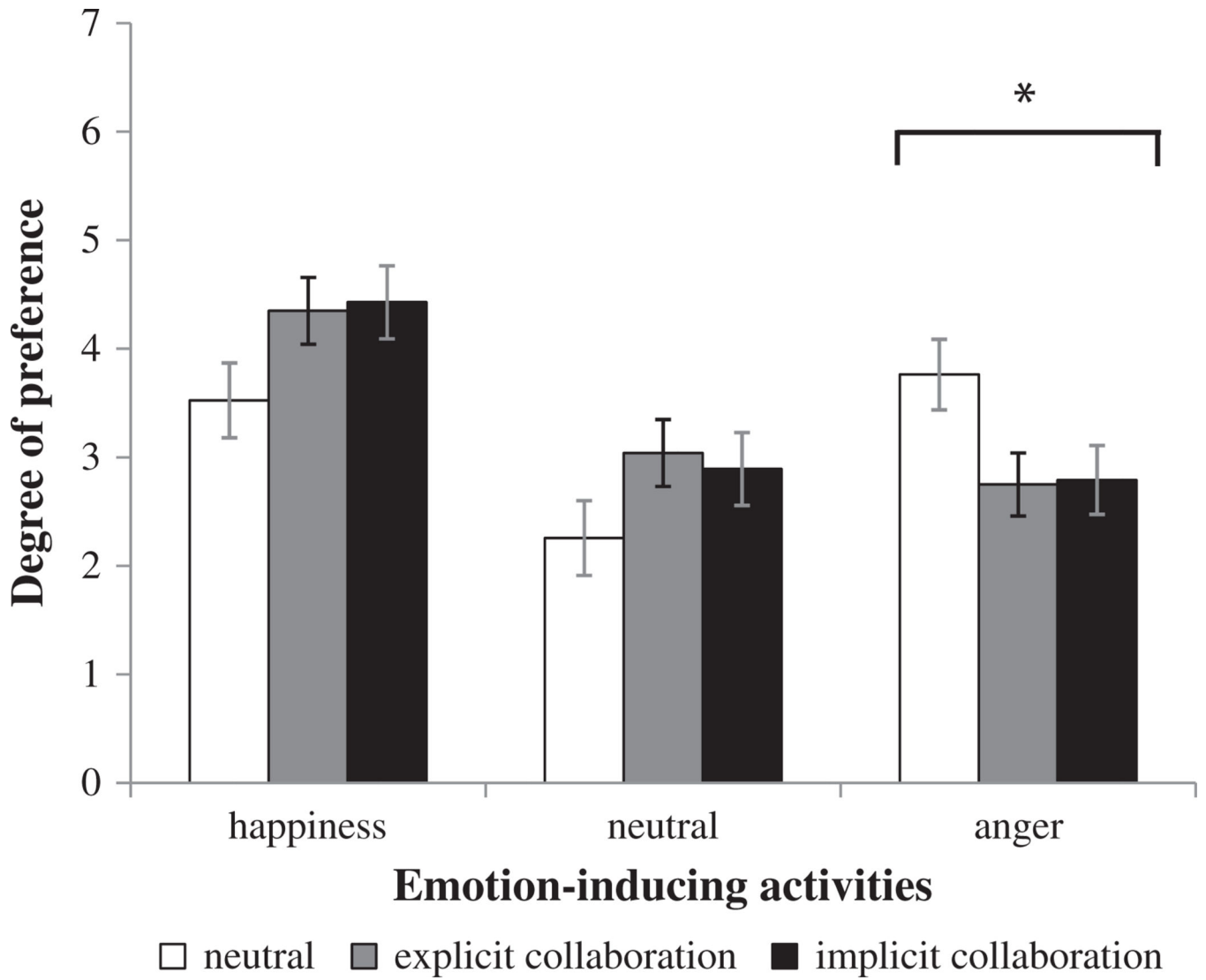


Fig. 2. Indirect preferences for happiness, neutral feelings, and anger, as a function of priming conditions (Study 2). Error bars represent ± 1 standard error of the mean.

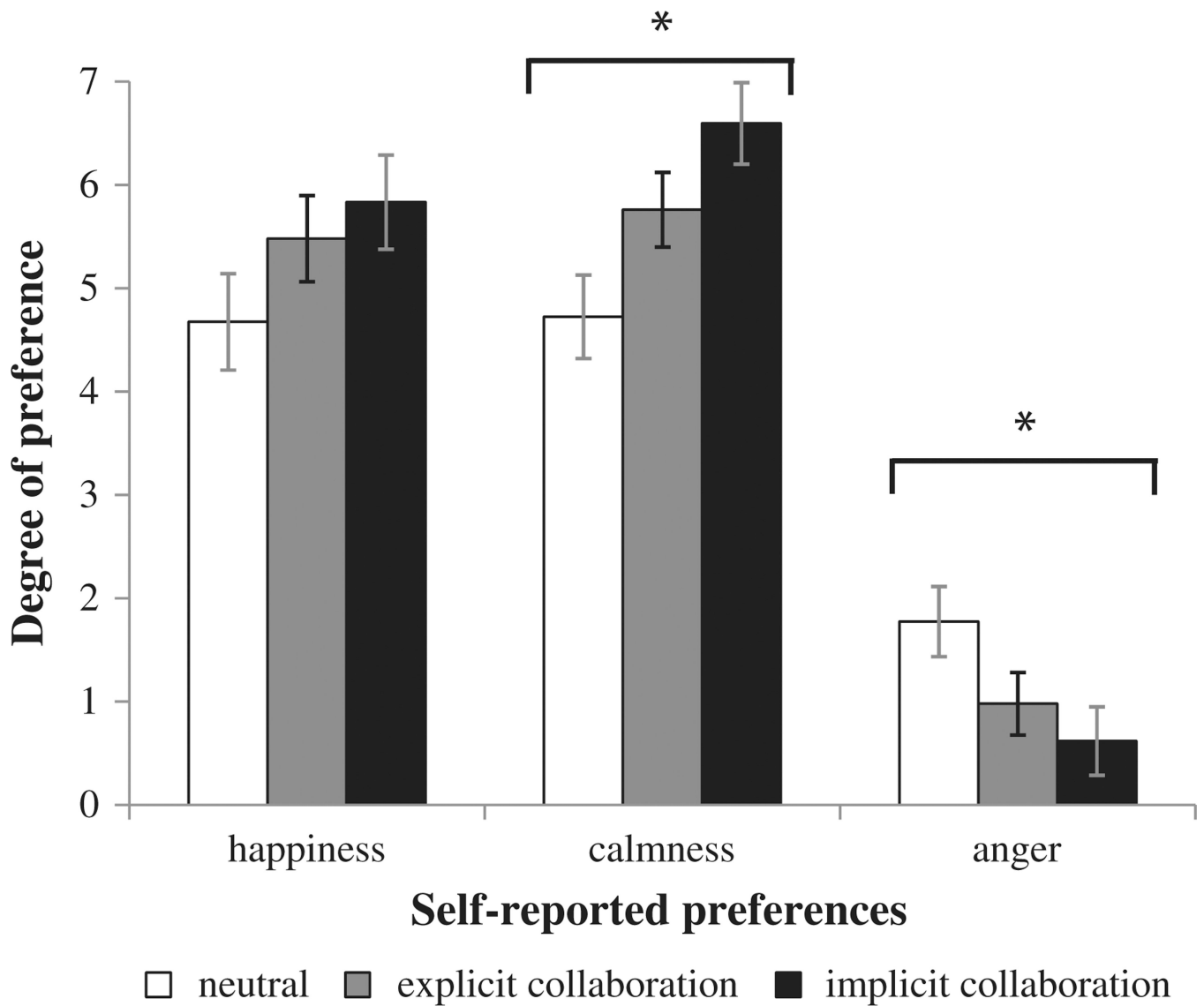


Fig. 3. Direct preferences for happiness, calmness, and anger, as a function of priming conditions (Study 2). Error bars represent ± 1 standard error of the mean.

Table 1

Zero-order correlations between direct and indirect indices of emotional preferences (Study 2).

Measures	Preferences for	1	2	3	4	5
Direct	1. Anger	–				
	2. Happiness	–.39*				
	3. Calmness	–.53*	.58*			
Indirect	4. Anger	.49*	–.10	–.27*		
	5. Happiness	–.04	.39*	.30*	.08	
	6. Neutral	.14	.10	.14	–.10	.46*