



Believe, express, and enjoy: utility beliefs about social emotion expression consistently predict satisfactory outcomes

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Abstract

The present study investigates the association between people's beliefs about emotion and their overall satisfaction with a social interaction. We focus on three specific aspects to examine this association: (a) utility beliefs—a dimension of emotion beliefs; (b) emotion expression—an emotion channel; and (c) four social emotions—anger, other-embarrassment, gratitude, and other-pride. We examine whether people's utility beliefs about expressing a social emotion can predict their evaluation of a social interaction when they express (vs. suppress) their social emotion. Results ($N=209$) consistently show that when people express their social emotion, their utility beliefs positively predict their satisfaction with an event. However, when people suppress their gratitude, their utility beliefs negatively predict their satisfaction, an effect not observed in the other three emotion events. These findings corroborate the claim that emotion beliefs impact people's emotional lives. Implications for research on emotion beliefs and motivated emotion regulation are discussed.

Keywords Beliefs about emotion · Emotion regulation · Emotion expression · Social emotion

There has been a growing interest in the literature on emotion regulation in not only *how* people regulate their emotions (i.e., emotion regulation strategies) but also *why* people regulate their emotions (i.e., emotion regulation motivation) (Matthews et al., 2021; Tamir et al., 2020). Beliefs about emotion are theorized to be one of the important factors that determine such motivations. Previous research on beliefs about emotion has taken a general approach—examining beliefs about emotion in terms of emotion in general without considering a specific emotion channel (e.g., Kneeland et al., 2020; Tamir et al., 2007). However, both theories and empirical studies have suggested that people can and do hold very specific beliefs about emotion with respect to distinct emotions (e.g., anger), emotion channels (e.g., expression), emotion evaluation (e.g., utility beliefs), and emotion controllability (e.g., implicit theories of emotion).

In the present study, we respond to a recent call for a more specific approach to evaluate beliefs about emotion (Ford & Gross, 2019). First, we focus on a specific and widely studied dimension of emotion beliefs—utility beliefs (López-Pérez et al., 2017; Netzer et al., 2018; Tamir & Ford, 2012). Second, we examine four distinct social emotions according to the social-functional perspective—anger, embarrassment, gratitude, and pride (Sznycer et al., 2021). Finally, we investigate the specific emotion channel that is most relevant to interpersonal interaction—emotion expression (English et al., 2017; Greenaway & Kalokerinos, 2019; Weidman & Kross, 2021). Accordingly, we examine the association between people's utility beliefs about expressing a social emotion and their overall satisfaction with an emotion event where they decided to either express or suppress their emotion. Utility beliefs about expressing emotion are defined as people's beliefs about whether expressing emotions are useful or not. Our approach thus contrasts with those of previous research on emotion beliefs, which do not differentiate emotion categories or channels, and with those of previous studies of emotion expression, which focus on only one distinct emotion or a general emotion valence (for a review, see Chervonsky & Hunt, 2017).

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Does emotion expression always bring about beneficial outcomes? The role of emotion beliefs and discrete emotions

Expressing emotions has adaptive social functions (Niedenthal & Brauer, 2012; van Kleef & Côté, 2022). According to the social–functional perspective, social emotions arise because people perceive fluctuations in their social valuation (Sznycer et al., 2021). This perspective also posits that expressing these social emotions prompts others to adjust their valuation of the self.

However, emotion expression—regardless of emotion valence—does not always engender beneficial outcomes (Chervonsky & Hunt, 2017; Greenaway & Kalokerinos, 2017; Le et al., 2020; Le & Impett, 2016; Weidman & Kross, 2021; Zhang et al., 2018). Hence, we propose that how satisfied a person is with an emotion event where they expressed their social emotion depends, in part, on their utility beliefs about expressing such an emotion. This study is based on the growing literature that underscores the importance of emotion beliefs for interpersonal outcomes. For instance, when people believe an emotion is useful (vs. useless), regardless of its valence, they are more likely to both intentionally experience such an emotion themselves (Netzer et al., 2018; Tamir et al., 2015; Tamir & Ford, 2012) and induce such an emotion in others (López-Pérez et al., 2017; Netzer et al., 2015). In addition, a recent study has demonstrated that when participants endorse the belief that their anger is useful (vs. when they do not), their experience of anger engenders more desired outcomes during social interaction (Tamir & Bigman, 2018). The authors thus conclude that “at least sometimes, what emotions do depends on what we expect them to do.” Concerning emotion expression, when people believe expressing an emotion is useful, they might be motivated to express their emotion directly to facilitate communicating their needs and goals to their interaction partners, which encourages their interaction partners to provide high-quality feedback (Forest et al., 2021). In sum, people’s evaluation of an emotion event might depend not only on whether they express their emotion but also on the extent to which they believe that the emotion expression is useful. In the present study, we therefore test whether people’s utility beliefs about expressing a social emotion interacts with their actual emotion expression (vs. suppression) to predict their satisfaction with an emotion event.

We furthermore examine whether utility beliefs about emotion expression play a similar or different role in four distinct social emotion events. Previous research on the association between utility beliefs and emotion regulation has mostly focused on a few emotions, primarily anger (López-Pérez et al., 2017; Netzer et al., 2015; Tamir & Ford,

2012). Moreover, although these studies have been conducted in interpersonal domains, their focal emotions have not been related to participants’ interaction partners. For instance, some participants up-regulated their anger by listening to anger-inducing music. In such a situation, the felt anger was neither elicited by nor directed toward another person, thereby depriving of this emotion’s social nature. Therefore, it remains unclear whether emotion beliefs operate similarly across different social emotions in people’s social interactions.

To bridge this gap, we introduce the social–functional perspective on emotion to the study of emotion beliefs in the interpersonal domain. Below, we review the social effect of each of the social emotions that we examine in the present study and propose how the effect of expressing an emotion might interact with people’s utility beliefs about such expression.

The effects of expressing social emotions and their relations with utility beliefs

We focus on two distinct negative social emotions and two distinct positive social emotions in the present study—anger, embarrassment, gratitude, and pride—based on the social–functional perspective on emotions (Sznycer et al., 2021). Here, we first focus on anger and gratitude because their social effects are extensively documented (Averill, 1983; Lench et al., 2016; Niedenthal & Brauer, 2012; Stellar et al., 2017; van Kleef & Côté, 2022). Then, we turn to embarrassment and pride and describe how each of these emotions can be further differentiated based on whether they are self- or other-oriented (Leary, 2007; Niedenthal & Brauer, 2012; Williams, 2018). We focus on the other-oriented feature of these social emotions because we intend to study these emotions with respect to their social nature. Specifically, because we examine anger and gratitude during interpersonal interactions in terms of the influence of others’ behaviors on the self’s social valuation, we similarly evaluate embarrassment and pride. This parallel provides a common ground that facilitates scrutinizing the role of utility beliefs about emotion expression in social emotions.

Regarding each of the social emotions, we outline the social effects of expression and their notable variations. Our central argument is that because what an emotion does in part depends on what people expect the emotion to do (Tamir & Bigman, 2018), whether expressing an emotion generates a satisfactory outcome also likely depends on what people expect expressing the emotion to produce. Therefore, when people *express* their emotion, the more they believe that expressing an emotion brings about useful outcomes (i.e.,

stronger utility beliefs), the more satisfied they should feel with the event.

Anger and gratitude

While anger is felt when a person feels undervalued by another, gratitude is felt when a person benefits from another person's actions and feels valued (Sznycer et al., 2021). The expression of anger can effectively engage attention and resolve other people's undervaluation (Lench et al., 2016; van Kleef & Côté, 2022), while the expression of gratitude can effectively strengthen the relationship between the beneficiary and the benefactor (Algoe et al., 2013; Sels et al., 2021; Stellar et al., 2017; van Kleef & Côté, 2022). Despite extensive research documenting the functions of expressing these social emotions, there are notable variations in how people evaluate events where these emotions are expressed.

Anger expression has been associated with the signal of a willingness to communicate and reconcile. Van Doorn et al. (2014) have argued that anger expression conveys that expressers care about a relationship and want to work with their interaction partner to resolve a current problem. However, there is also evidence indicating that anger expression is detrimental to close relationships. For instance, Lemay et al. (2012) have found that anger toward others elicits destructive responses and lowers relationship satisfaction. Given the varied effects of anger expression in interpersonal relationships, people are likely to hold different utility beliefs about expressing this emotion (Averill, 1983; Netzer et al., 2018), which in turn affects their evaluation of an emotion event. Indeed, in a recent study, Tamir and Bigman (2018) found that when participants believed anger was useful (vs. not believing so), their anger (vs. calmness) produced better performance during a laboratory task. Based on this finding, we hypothesize that when people express their anger toward their interaction partner, the more they believe their anger expression is useful, the more satisfied they feel with the event.

Gratitude expression has been shown to effectively strengthen the relationship between the beneficiary and the benefactor (Algoe et al., 2013; Stellar et al., 2017). However, Zhang et al. (2018) found that explicit verbal expression of gratitude predicted negative mood among Chinese participants and that this effect was mediated by people's beliefs about what gratitude expression would engender. Therefore, we hypothesize that when a person expresses their gratitude, the more they believe their gratitude expression is useful, the more satisfied they feel with the event.

Additionally, we advance another hypothesis about gratitude *suppression*: when people suppress their gratitude, the more they believe that expressing their gratitude is useful, the less satisfied they feel with the event. Recent research

has shown that people do not communicate their gratitude because of their miscalibrated social cognitions about gratitude expression: People overestimate how awkward and underestimate how pleasant and surprised their gratitude expression will make the recipient of their gratitude feel (Kumar & Epley, 2018). These miscalibrated beliefs have been proposed to be critical impediments to people's gratitude expression (Kumar, 2022). Because events that elicit gratitude experience and call for a gratitude expression are opportunities to strengthen social connections, when people suppress their gratitude, there is a clear cost: the opportunity to deepen their bond with others. In addition, because psychological conflicts are negatively valenced (Inzlicht et al., 2015), their dissatisfaction might be especially strong when people believe gratitude expression to be useful but do not express it due to their miscalibrated social cognitions. Therefore, we hypothesize that the more people believe expressing gratitude to be useful, the larger the cost of not expressing gratitude.

Other embarrassment and other-pride

Based on the social–functional perspective (Sznycer et al., 2021), we define other-embarrassment/other-pride as the embarrassment/pride that one person feels because of something another person does, which can potentially reduce/increase the first person's social valuation. For clarity, we refer to the first person (i.e., the person who feels the emotion) as person A and the second person (i.e., the person who does something perceived by person A to affect person A's social valuation) as person B.

Self-embarrassment is felt when one has done something that the self perceives could threaten the self's social valuation (Sznycer et al., 2021). Self-embarrassment expression serves to appease others and to promote the restoration of social valuation (Feinberg et al., 2012; Keltner & Buswell, 1997; Le et al., 2020; van Kleef & Côté, 2022). In contrast, other-embarrassment is felt when person B has done something that person A perceives could threaten the self's social valuation, regardless of whether person B also perceives a threat of social valuation (Leary, 2007; Niedenthal & Brauer, 2012). For instance, a mother might feel other-embarrassment when her two-year-old child has a tantrum at a mall, while her child experiences no self-embarrassment at all. Because self-embarrassment is a self-conscious emotion (Keltner & Buswell, 1997; Leary, 2007), for other-embarrassment to be felt, there must be a degree of self-concept overlap between person A and person B. Otherwise, person B's actions should not influence person A's social valuation, nor will person A be motivated to express embarrassment to appease others and restore his or her potentially lowered social valuation.

Person A's other-embarrassment expression toward person B could result in either satisfactory or unsatisfactory outcomes because such an expression could communicate that person A wants to protect either their mutual (person A and B's) social valuation or only the self's (person A's) social valuation. On the one hand, person A's other-embarrassment expression might help person B understand person A's intentions and facilitate collective social valuation (cf., Lemay et al., 2021). On the other hand, person A's other-embarrassment expression might signal person A's desire to exclude person B from the self's self-concept to ameliorate the social threat caused by person B. This could reduce the social connection between the two people, which could result in lower personal well-being and relationship satisfaction.

Self-pride is felt when one has done something that the self perceives could heighten the self's social valuation (Sznycer et al., 2021). Self-pride expression signals power and status, and it elicits the observer's investment of social valuation in the self (Tracy et al., 2013; van Kleef & Côté, 2022). In contrast, other-pride is felt when person B has done something that person A perceives could benefit the self's social valuation, regardless of whether person B also perceives a benefit for social valuation (Cialdini et al., 1976; Williams, 2018). Continuing the previous mother-child example, an instance of other-pride could be when a mother feels proud of her child's first day of school, while her child might not feel any self-pride. Similarly, a degree of self-concept overlap should exist for person A to feel other-pride for person B's behaviors.

Expressions of other-pride should bring about satisfactory outcomes because of the strengthened relationship between the two parties (Gable & Reis, 2010). However, when people intentionally up-regulate and express their other-pride, they might feel inauthentic, souring their evaluation of the event (Le & Impett, 2016; Weidman & Kross, 2021).

Accordingly, we propose that the differences in people's evaluation of an event where they express their other-embarrassment and other-pride might be captured by their utility beliefs about expressing these emotions. Given these emotions' parallel of the other-oriented feature with anger and gratitude, we hypothesize that when people express their other-embarrassment/other-pride to their interaction partner, the more they believe that expressing these emotions is useful, the more satisfied they feel with the event.

Finally, although both other-pride and gratitude are positive social emotions, we do not expect people's utility beliefs about other-pride expression to be associated with dissatisfaction with an event when they *suppress* their other-pride. Unlike gratitude, suppression of other-pride is not associated with a clear cost to social connection and might

sometimes generate beneficial outcomes (Brummelman et al., 2015; Zajenkowski & Gignac, 2021). Similar logic informs our decision not to advance hypotheses about anger and other-embarrassment suppression: suppression of these negative social emotions can sometimes enhance interpersonal harmony, as we reviewed above.

Aim of the present study

The present investigation examines whether people's expression of each of the social emotions interacts with their utility beliefs about expressing an emotion to predict their satisfaction with an emotion event. Specifically, it is hypothesized that when people express their social emotion, the more they believe that expressing the emotion is useful, the more satisfied they are with the event. Moreover, regarding gratitude expression, we hypothesize that when people *suppress* their gratitude, the more they believe that their gratitude expression is useful, the less satisfied they are with the event. To test these hypotheses, we employ an emotion recall task that allows us to measure people's beliefs about expressing each social emotion during four different emotion events. Notably, although each of these emotions is theorized to have different forms and functions, they are all considered adaptive, helping people navigate their social lives. As a first step to reveal whether the subjective adaptiveness of people's emotion expression depends not only on their expression per se but also on their utility beliefs about expressing an emotion, we intentionally measure a general outcome variable (i.e., event satisfaction) instead of a specific variable related to each emotion (e.g., regaining control in an anger event or increasing connection in a gratitude event) (for a similar approach, see Weidman & Kross, 2021). For brevity, other-embarrassment and other-pride are referred to simply as embarrassment and pride in the analyses and figures below.

Methods

Participants

A power analysis using the *pwr* package (version: 1.3-0, Champely et al., 2020) indicated that a sample size of 193 would be sufficient to detect an effect size of $r = .20$ with 80% power at the significance level of 0.05. Therefore, 214 Taiwanese participants were recruited both from the university and the community. Five of them failed to follow the instructions to recall social emotion events (see procedure below) and were removed, leaving the final sample size at 209. The sample was 46% male, 62% college students, and

the mean age was 28.12 ($SD=6.68$). The procedure was approved by the Institutional Review Board at Academia Sinica. Participants provided their consent at the beginning of the study and received 300 \$NTD (approximately 11 \$USD) upon its completion. Data collection occurred between September and November 2021.

Procedure

Participants were invited to the researchers' lab for the emotion recall task. They were told to recall four specific events where they had experienced a distinct social emotion (i.e., anger, embarrassment, pride and gratitude; their order was balanced among participants). Specifically, the instructions read:

In our relationships with other people, we often feel all kinds of emotions, whether positive or negative. When we feel an emotion in an interpersonal relationship, we might choose to express or suppress it. We are interested in your recent experiences with deciding whether to express or suppress your felt emotion to others. When thinking about such experiences, please keep the following things in mind: (a) The emotion you felt must have happened WITHIN your relationship with the other person and have been directed TOWARDS the other person because of something they had done. That is, the emotion you felt because of someone or something other than your interaction partner is not what we are interested in. For instance, your expression of your anger about your boss to your partner does not count. However, it counts if your anger about your boss was expressed towards your boss. (b) Please limit your relationship partners to persons that you feel were communal or dependent, such as your colleagues on the same project, romantic partner, or siblings. That is, the relationship partners must not be your enemies, and you would not intentionally sabotage them. (c) Please limit the relationship partners to human beings in your life. That is, the relationship partners must not be an idol you have never met, a god, a pet, etc.

Next, participants read:

We would like you to recall a time when you felt [anger/embarrassment/gratitude/pride].

After indicating that they had successfully remembered an event, participants answered two items about the characteristics of the event: event time, i.e., "How long ago was this event?" (the number of months was entered; events that

happened within less than a month were entered as 0); and recall difficulty, i.e., "How difficult was it to remember such an event?" (1 = extremely easy, 7 = extremely difficult). Participants then responded to two items about their relationship quality with the target of their social emotion: "How close were you with this person?" (1 = extremely distant, 7 = extremely close) and "Overall, how satisfied were you with your relationship with them?" (1 = extremely unsatisfied, 7 = extremely satisfied). These two items were highly correlated across all four emotion events (r s ranging from 0.48 to 0.71, p s < 0.001) and were therefore averaged to form a composite score. Next, to increase the salience of their recalled event, participants were asked to describe the event in detail with no less than 250 typed Chinese characters. As a manipulation check, they were shown 11 emotion words (i.e., *irritated, compromised, disappointed, contempt, thankful, indebted, basked in the reflected glory, inferior, jealous, shameful, interested*) upon finishing their description of the event, and they were asked to indicate the degree to which they felt each emotion during the event (0 = did not feel this emotion to 6 = extremely intense). As another manipulation check, we used the *Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2015)* software and loaded the empirically validated Chinese dictionary (Lin et al., 2020) to analyze the quantity of emotion words used in the participants' writing.

With a specific emotion event in mind, participants responded to a set of four items on their utility beliefs about expressing the focal social emotion (see measures below). They then indicated whether they had expressed the focal social emotion (one dichotomous item: 1 = expressed and 0 = suppressed) and completed one item regarding their overall satisfaction with the event (−3 = least satisfied, 0 = neutral, and 3 = most satisfied). The above procedure was repeated for the next social emotion until all four emotions were recalled. The task took approximately 1.5 h to complete.

Measures

Utility beliefs about expressing emotion

Previous studies and theoretical framework have indicated that utility beliefs about expressing emotion span across both instrumental and emotional aspects (López-Pérez et al., 2017; Netzer et al., 2018; Tamir, 2016; Tamir & Bigman, 2018). Therefore, we created a set of four items (two for instrumental and two for emotional aspect) to measure participants' utility beliefs about expressing a felt social emotion for each event. All items read: "Please use the following scale to indicate what you thought expressing your [anger/embarrassment/gratitude/pride] would bring

about.” Participants responded to these items with a 7-point bipolar scale ranging from -3 to 3 . For the two instrumental utility beliefs, the two poles of the scale points were worded as “[$-3 = hinder/3 = facilitate$] our collaboration” and “[$-3 = block/3 = improve$] our work progress.” For the two emotional utility beliefs, the two poles of the scale points were worded as “[$-3 = worsen/3 = better$] our relationship” and “make the other person [$-3 = misunderstand/3 = understand$] me.” The scale midpoint (i.e., 0) indicated that participants believed that expressing the social emotion would produce “no influence.” These four items demonstrated high reliabilities across all four social emotion events (α s ranging from 0.87 to 0.88) and were therefore averaged to form a composite score. Higher scores indicated that participants believed that expressing the focal social emotion was more useful.

Analytic strategies

Prior to any analyses, we computed the intraclass correlation coefficients of people’s utility beliefs across the four social emotion events. This ensured that our within-person design did not introduce severe dependency of variables across events and that an event-level, instead of a person-level, analysis would provide accurate test statistics. Consistent with the theory that beliefs about emotion should be studied in an emotion-specific way (Ford & Gross, 2019), a large within-person variation in utility beliefs was found with an intraclass correlation reliability (ICC) < 0.01 . The extremely low ICC indicates that people’s utility beliefs about expressing emotion varied substantially across emotion events. We then ran the same analysis on people’s satisfaction for an emotion event across all four emotion events and again found an extremely low ICC (< 0.01).

To further examine the differences across social emotion events, we ran the following analyses with the type of social emotion as the only predictor: First, a chi-squared test was run to examine whether certain emotions were more likely to be expressed. Second, we ran two repeated analyses of variance (ANOVAs) to examine (a) whether certain social emotion events were rated as more satisfactory than others and (b) whether certain social emotions were believed to be more useful than others.

Finally, for the event-level analyses, we first conducted an independent t -test to examine whether expression (vs. suppression) was associated with greater event satisfaction for each social emotion event. Next, we built a multiple regression model, again for each emotion event, to examine the role of participants’ utility beliefs in the above association. Specifically, we were interested in the interaction between emotion expression and utility beliefs. If the interaction term was significant, we decomposed the interaction

and examined the two simple slopes of utility beliefs, respectively predicting event satisfaction when participants expressed and suppressed their emotions. These two simple slopes were plotted to facilitate interpretation.

In separate models, the above analyses were rerun with control variables included to assess the robustness of the results. First, a set of person-level covariates were entered in the models, including: demographic information (age and sex) and participants’ perceived distress due to the COVID-19 pandemic to rule out the effect of current emotional state on the evaluation of recalled events (“How distressed are you over the COVID-19 pandemic?”; $1 =$ not at all, $10 =$ extremely). Controlling for participants’ perceived distress due to the COVID-19 pandemic allowed us to rule out the effect of current emotional state on the evaluation of recalled events. Next, for each emotion event model, event-level covariates were entered, including: event time, recall difficulty, relationship quality with the interaction partner, the number of words participants wrote when describing the event¹, and how authentic participants felt during the event (“To what extent did you feel like you were being your real, genuine self during the situation?”; $1 =$ extremely low, $7 =$ extremely high”). Word count was controlled for to rule out the effect of event salience on event satisfaction, and state authenticity was controlled for to account for the possibility that participants only expressed their emotion in order just to be themselves, which might positively color their evaluation for the event (Lenton et al., 2013; Sedikides et al., 2017). All analyses were conducted with *R* (version 4.1.2; R Core Team, 2017), and the plots were generated with the *Python* (version 3.10.1; vanRossum & Drake, 2009) *Altair* package (VanderPlas et al., 2018).

Results

Manipulation checks

Feelings during emotion events

Table 1 shows the descriptive statistics and mean comparisons of emotion intensity across the four social emotion events. A repeated-measures ANOVA showed that participants’ irritation level differed across events $F(2.49, 517.35)^2 = 549.56, p < .001, \eta^2 = 0.73$. Post hoc paired comparisons with Bonferroni correction showed that participants’ irritation was significantly stronger during their anger event than in their other three social emotion events. The same analysis was then run for participants’ shame level,

¹ Word count was calculated with LIWC.

² All the degrees of freedom of an F statistic in this paper that were not an integer were adjusted with Greenhouse–Geisser correction.

Table 1 Manipulation checks based on ratings of felt emotion and LIWC

	Anger		Embarrassment		Gratitude		Pride		F	p	η ²
	M (SD)		M (SD)		M (SD)		M (SD)				
<i>Felt emotion</i>											
Irritation	5.01 (1.09)^a		3.21 (2.02) ^b		0.43 (1.20) ^c		0.43 (1.27) ^c		549.54	< 0.001	0.73
Shame	0.96 (1.66) ^a		3.68 (1.97)^b		0.77 (1.51) ^a		0.27 (0.90) ^c		247.80	< 0.001	0.54
Thankfulness	0.23 (0.71) ^a		0.38 (0.96) ^a		5.24 (1.18)^b		2.71 (2.15) ^c		660.14	< 0.001	0.76
Basked glory	0.15 (0.69) ^a		0.15 (0.57) ^a		1.50 (1.92) ^b		4.64 (1.67)^c		575.73	< 0.001	0.74
<i>Word category</i>											
Positive emotion	2.89 (1.68) ^a		2.98 (1.80) ^a		5.43 (2.53) ^b		6.05 (2.82) ^b		125.26	< 0.001	0.38
Negative emotion	5.08 (2.40) ^a		5.02 (2.37) ^a		2.78 (1.95) ^b		2.52 (1.76) ^b		98.25	< 0.001	0.32

Bold values in the felt emotion section represent the corresponding felt emotion in the social emotion event. Different superscript letters represent values that are statistically different. Basked glory = basked in the reflected glory

$F(2.56, 533.31) = 247.80, p < .001, \eta^2 = 0.54$, and post hoc paired comparisons showed that participants' shame was significantly stronger during their embarrassment event than in their other three social emotion events. Similarly, participants' thankfulness level was different across their events, $F(2, 415.39) = 660.14, p < .001, \eta^2 = 0.76$, and was stronger in their gratitude event than in their other events. Finally, the reflected glory that participants felt was different across their events, $F(2.15, 447.69) = 575.73, p < .001, \eta^2 = 0.74$, and was stronger in their pride event than in their other events.

Writing for emotional events

We utilized the positive and negative emotion word categories within LIWC as the manipulation checks. Table 1 shows the descriptive statistics and mean comparisons of emotion words across the four social emotion events. A repeated-measures ANOVA showed that the quantity of negative words participants wrote differed across social emotion events, $F(2.8, 583.37) = 125.26, p < .001, \eta^2 = 0.38$. Post hoc paired comparisons showed that participants wrote more negative emotion words when describing anger and embarrassment events than when describing gratitude and pride events. Another repeated-measures ANOVA showed that the quantity of positive words participants wrote also differed across social emotion events, $F(2.85, 593.39) = 98.25, p < .001, \eta^2 = 0.32$. Post hoc paired comparison showed that participants wrote more positive emotion words when describing gratitude and pride events than when describing anger and embarrassment events. Taken together, these analyses provided validity to our emotion recall task of prompting participants to remember distinct social emotion events.

Mean-level comparisons across events

Descriptively, anger was expressed by 63.20% of participants, embarrassment by 31.60%, gratitude by 78.47%, and pride by 67.46%. Figure 1 charts these percentages. A chi-squared test showed that emotion category was associated with whether participants expressed their emotion, $\chi^2(3) = 105.91, p < .001, \text{Cramer } V = 0.36$.

As shown in Table 2, participants' utility beliefs differed across emotion events, $F(2.5, 519.45) = 352.22, p < .001, \eta^2 = 0.63$. Post hoc paired comparisons showed that participants believed gratitude to be the most useful, followed by pride, anger, and embarrassment. Finally, participants' ratings on utility beliefs were compared to the scale midpoint (i.e., 0), and it was found that expressing anger and embarrassment were not believed to be useful (i.e., below

Fig. 1 Percentage of expression/suppression for each social emotion event

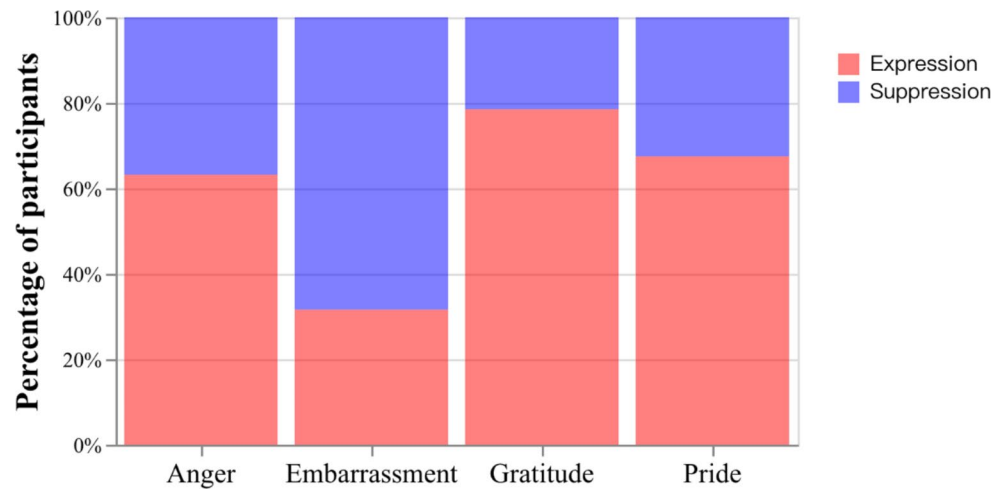


Table 2 Descriptive statistics and mean comparisons of the event-level variables

	Anger	Embarrassment	Gratitude	Pride			
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>F</i>	<i>p</i>	η^2
Utility beliefs	-0.74 (1.25) ^a	-1.05 (1.12) ^b	1.64 (0.83) ^c	1.20 (0.94) ^d	352.22	<0.001	0.63
Event Satisfaction	-0.47 (1.75) ^a	-0.41 (1.55) ^a	1.66 (1.36) ^b	1.57 (1.26) ^b	145.28	<0.001	0.41
<i>Control variables</i>							
Time (months)	5.69 (7.67)	8.77 (9.52)	5.00 (6.62)	7.24 (8.24)	11.32	<0.001	0.05
Recall difficulty	2.91 (1.64)	4.07 (1.90)	2.40 (1.38)	3.84 (1.88)	54.30	<0.001	0.21
Relationship quality	4.43 (1.61)	4.32 (1.45)	5.46 (1.11)	5.50 (1.13)	60.41	<0.001	0.23
Authenticity	4.71 (1.99)	4.33 (1.80)	5.75 (1.37)	5.57 (1.39)	42.31	<0.001	0.17
Word count	168.2 (62.116)	157.87 (47.27)	153.72 (43.73)	147.50 (37.49)	11.96	<0.001	0.05

Different superscript letters represent values that are statistically different

0), while expressing gratitude and pride were believed to be useful (i.e., above 0).

As shown in Table 2, participants' event satisfaction differed across emotion events, $F(2.81, 584.10) = 145.28$, $p < .001$, $\eta^2 = 0.41$. Post hoc paired comparisons showed that participants were equally satisfied with the two negative social emotion events (i.e., anger and embarrassment events) and the two positive social emotion events (i.e., gratitude and pride) and that each of the valence comparisons was significant (i.e., gratitude = pride > anger = embarrassment). Finally, participants' ratings on event satisfaction were compared to the scale midpoint (i.e., 0), and it was found that events involving negative social emotions were deemed unsatisfying (i.e., below 0), while those involving positive emotions were considered satisfying (i.e., above 0).

Event-level analyses

Figure 2 charts the mean scores of event satisfaction when participants expressed and suppressed their social emotion across all events.

Anger event

First, a between-subject *t*-test showed that participants were equally satisfied with the anger event whether they expressed their anger or not, $t(207) = -1.22$, $p = .224$, $d = -0.17$. In the regression model, anger expression (vs. suppression) was not a significant predictor of event satisfaction, standardized regression coefficient $\beta = 0.03$, $p = .618$, whereas utility beliefs was, $\beta = 0.17$, $p = .038$. Moreover, we found the expected interaction effect between the two predictors, $\beta = 0.18$, $p = .024$. Simple slopes analysis showed that when participants *expressed* their anger, the more they believed that expressing their anger was useful, the more satisfied they were with the event, $\beta = 0.35$, $p < .001$. In contrast, when participants *suppressed* their anger, their utility beliefs were not associated with their event satisfaction, $\beta = -0.02$, $p = .907$. The first panel of Fig. 3 charts these simple slopes. Across several models, the interaction effect remained essentially unchanged after control variables were entered, $0.16 \leq \beta_s \leq 0.18$, $ps < .05$.

Fig. 2 Event satisfaction of expression/suppression for each social emotion event. Note: Error bars indicate the 95% confidence intervals

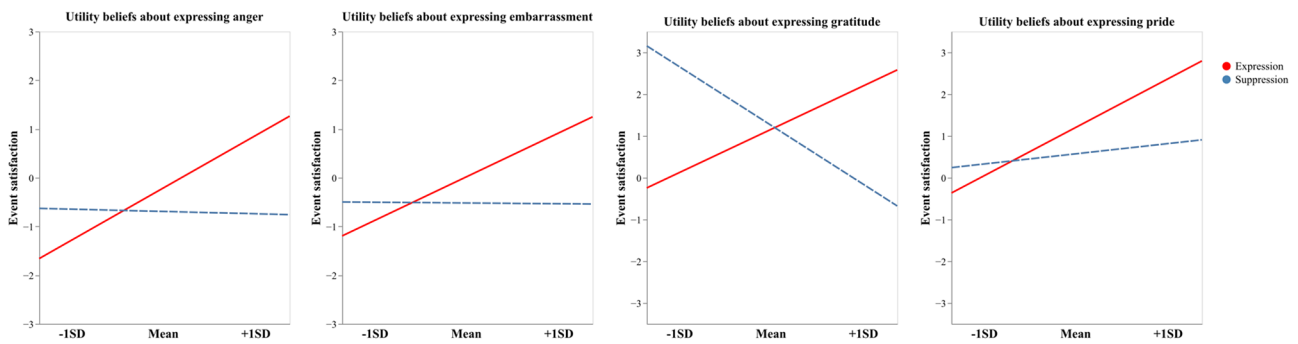
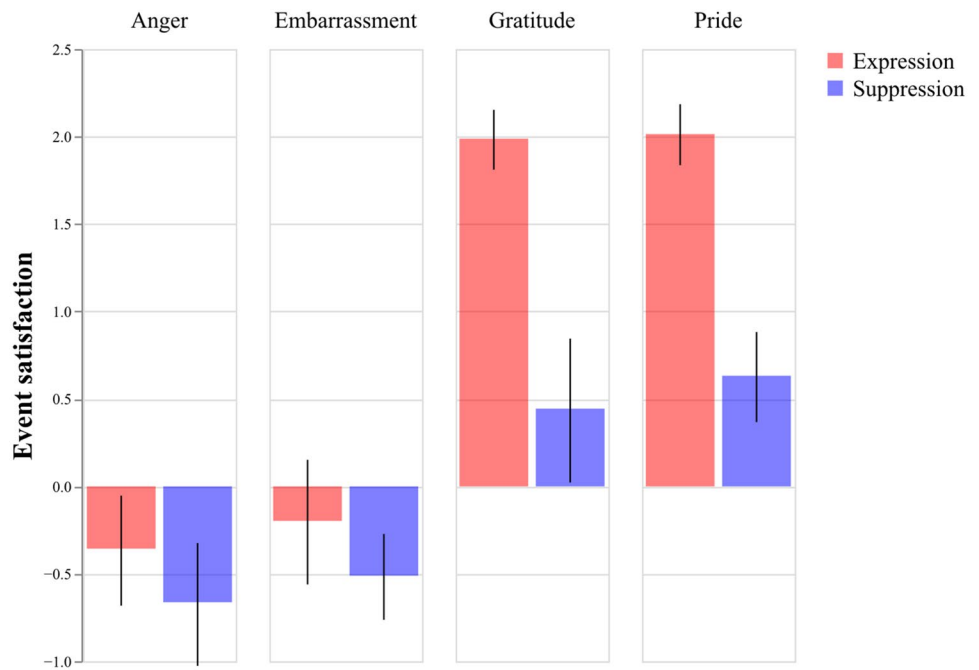


Fig. 3 Interaction between expression/suppression and utility beliefs on predicting event satisfaction for each social emotion

Embarrassment event

Similar to the anger event, participants were equally satisfied with the embarrassment event regardless of their embarrassment expression, $t(207) = -1.37, p = .173, d = -0.19$. In the regression model, embarrassment expression (vs. suppression) was not a significant predictor of event satisfaction, $\beta = 0.04, p = .647$, whereas utility beliefs was, $\beta = 0.14, p = .048$. Moreover, we found the expected interaction effect between the two predictors, $\beta = 0.15, p = .041$. Simple slopes analysis showed that when participants *expressed* their embarrassment, the more that they believed expressing their embarrassment was useful, the more satisfied they were with the event, $\beta = 0.29, p = .009$. In contrast, when participants *suppressed* their embarrassment, their utility beliefs were not associated with their event satisfaction, $\beta < -0.01, p = .959$. The second panel of Fig. 3 charts these simple

slopes. Entering control variables in the regression models reduced the effect size of the interaction term, rendering it marginally significant, $0.12 \leq \beta \leq 0.15, 0.035 \leq ps \leq 0.080$. Despite some models showing marginal significance, we proceeded to decompose the interaction term and found the same results: When participants *expressed* their embarrassment, their utility beliefs positively predicted their event satisfaction, $0.22 \leq \beta_s \leq 0.33, .003 \leq ps \leq .043$; when they *suppressed* their embarrassment, their beliefs were not associated with their event satisfaction, $-0.03 \leq \beta_s \leq 0.03, .713 \leq ps \leq .942$.

Gratitude event

For the gratitude event, participants were more satisfied when they expressed (vs. suppressed) their gratitude, $t(207) = 7.60, p < .001, d = 1.06$. In the regression model,

gratitude expression (vs. suppression) was a significant predictor of event satisfaction, $\beta = 0.64$, $p < .001$, whereas utility beliefs was not, $\beta = -0.05$, $p < .439$. Once again, we found the expected interaction effect between the two predictors, $\beta = 0.34$, $p < .001$. Simple slopes analysis showed that when participants *expressed* their gratitude, the more that they believed expressing their gratitude was useful, the more satisfied they were with the event, $\beta = 0.29$, $p < .001$. Furthermore, when participants *suppressed* their gratitude, the more that they believed expressing their gratitude was useful, the *less* satisfied they were with the event, $\beta = -0.39$, $p < .001$. The third panel of Fig. 3 charts these simple slopes. Across several models, the interaction effect remained essentially unchanged after control variables were entered, $0.28 \leq \beta_s \leq 0.31$, $p_s < .001$.

Pride event

Similar to the gratitude event, for the pride event, participants were more satisfied when they expressed (vs. suppressed) their pride, $t(207) = 8.66$, $p < .001$, $d = 1.20$. In the regression model, both pride expression and utility beliefs were significant predictors of event satisfaction, $\beta_s = 0.45$, and 0.24 , respectively, both $p_s < .001$. Moreover, we once again identified the expected interaction effect between the two predictors, $\beta = 0.15$, $p = .022$. Simple slopes analysis showed that when participants *expressed* their pride, their utility belief positively predicted event satisfaction, $\beta = 0.39$, $p < .001$, while when participants *suppressed* their pride, their utility beliefs were not associated with event satisfaction, $\beta = 0.08$, $p = .431$. The fourth panel of Fig. 3 charts these simple slopes. Across all models but one controlling for authenticity, the interaction effects remained essentially unchanged after control variables were entered, $0.15 \leq \beta_s \leq 0.16$, $p_s < .05$, with the simple slopes of utility beliefs when people expressed their pride $0.35 \leq \beta_s \leq 0.39$, $p_s < .001$ and when people suppressed their pride $0.06 \leq \beta_s \leq 0.07$, $.460 \leq p_s \leq .558$. Although in the model controlling for authenticity, the interaction term was not significant, $\beta = 0.05$, $p = .205$, simple slopes analysis still showed the expected results: When participants *expressed* their pride, their utility beliefs positively predicted their event satisfaction, $\beta_s = 0.27$, $p = .001$; when they *suppressed* their pride, their beliefs were not associated with their event satisfaction, $\beta = 0.11$, $p = .291$.

General discussion

Previous research has examined the outcomes of emotion regulation that is driven by utility beliefs and has assumed that such outcomes were due to the altered emotion

experience that results from motivated emotion regulation. In the present investigation, we extend this line of research by demonstrating that people's beliefs about emotion also shape their evaluation of an emotion event after their expression of a felt social emotion. To the best of our knowledge, this is the first study to test whether beliefs about emotion interact with emotion regulation strategy (emotion expression) to predict people's satisfaction with an emotion event. The strengths of the present investigation—in addition to our specific approach—include our use of a non-WERID Asian sample with both students and nonstudent participants (Henrich, 2020), adoption of an ecologically valid emotion recall task, and inclusion of meaningful covariates as robustness checks. Although each of the social emotions is theorized to have different functions and social effects, across four emotion events, we find consistent support for the hypothesis that when people *express* their emotion, the more they believe that expressing this emotion is useful, the more satisfied they are with the emotion event. Therefore, people's utility beliefs about emotion expression seem to play a similar role in their subjective evaluation of an event where they express a social emotion.

Moreover, we advance—and find support for—an additional hypothesis about the *suppression* of gratitude: when people *suppress* their gratitude, the more they believe that expressing gratitude is useful, the less satisfied they are with the event. We propose that the negative slope is in part due to (a) lower satisfaction as a result of the internal conflict between people's estimations of their interaction partner's awkwardness, pleasantness, and surprisingness and their own utility beliefs and (b) higher satisfaction as a result of alignment between estimations and utility beliefs. In addition, given the strong and robust enhancing effect of gratitude expression on relational well-being, when people do not express gratitude, they not only fail to reap the benefits of such expressions but may also experience a cost associated with not expressing gratitude.

Implications for research on emotion beliefs and emotion regulation

In the present study, we demonstrate that people's utility beliefs about emotion expression differ across emotion categories. At the mean level, participants most strongly endorsed utility beliefs for gratitude expression, followed by other-pride, anger, and other-embarrassment. This not only suggests that people tend to believe that expressing positive emotion is more useful than expressing negative emotion but also indicates meaningful differences in the discrete emotions of the same valence. The identified variation in utility beliefs was also bolstered by the low ICCs for the

beliefs across emotion events, indicating that people do not systematically hold the same levels of utility beliefs for emotion expression for all the social emotions that they experience. Our findings are thus consistent with the theoretical claim that beliefs about emotion should be studied with a fine-grained approach that specifies emotion category (Ford & Gross, 2019). However, because we focus on one specific emotion channel (expression vs. suppression), whether people hold different levels of beliefs across channels for the same emotion category, as the theory suggests, requires further testing. For instance, it might be possible that while people believe that expressing anger is useful, they might also believe that experiencing anger is not (Greenaway & Kalokerinos, 2017). Other subordinate beliefs about aspects of emotion should also be examined in future research, such as intensity (e.g., anger versus outrage) and duration (e.g., feeling angry for 10 min versus 10 days).

Limitations and future directions

Despite our consistent identification of the positive associations between utility beliefs about social emotion expression and event satisfaction across events, we acknowledge several limitations of the present study and propose directions for future research. First, we did not consider the across-partner effect of participants' beliefs about emotion and of their emotion expressions. Future research can consider whether and how the interaction between emotion expression and emotion beliefs also shapes partners' evaluation of an emotion event and the dyad's relationship satisfaction level (e.g., Le et al., 2020).

Second, regarding other-embarrassment and other-pride, we focused on the similarity of how these emotions were elicited in participants and did not consider the difference between shared or individual emotion experiences. That is, the present results do not indicate whether people's interaction partners also feel that these emotions matter. It is plausible that whether participants' interaction partners felt the embarrassment/pride that the participants were feeling shaped how they reacted to participants' emotion expression or suppression, thereby shaping both parties' evaluations of an emotion event.

A related question would be whether and how people's utility beliefs about emotion expression vary according to whether an emotion is shared along with the valence of emotion. For instance, concerning shared negative emotion, people might endorse either *stronger* utility beliefs, because sharing the same emotion makes it easy to communicate why one is upset, or *weaker* utility beliefs, because one might fear that expressing a negative emotion will further

upset others. These competing possibilities remain to be tested.

Finally, the emotions evaluated in the present study were selected according to one of the theoretical frameworks of the social–functional perspective. These emotions were carefully selected and held constant amid their various elicitors (i.e., interaction partner's behaviors). Future research can identify other emotions with different theoretical frameworks and examine whether emotions beliefs operate similarly across those emotions (Shiota et al., 2017; van Kleef & Côté, 2022). For instance, gratitude, compassion, and awe have been categorized as self-transcending emotions with shared social functions (Stellar et al., 2017). Future research can therefore scrutinize whether people's beliefs about these emotions are similar with respect to the mean levels of these emotion beliefs and their predictability for important social outcomes.

Conclusion

The current study adopted a specific approach for studying emotion beliefs and examined whether people's utility beliefs about expressing a specific social emotion can predict their evaluation of the event differently whether they expressed or suppressed their felt social emotion. Across four social emotions, we consistently showed that when people express a social emotion, their utility beliefs positively predict their satisfaction with the emotion event. Furthermore, we found that only when people suppress their gratitude do their utility beliefs negatively predict their event satisfaction. Overall, we have demonstrated that emotion beliefs play a similar role in shaping people's evaluation of an emotion event after an emotion regulation decision.

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