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STROKING YOUR BELOVED ONE'S WHITE BEAR: RESPONSIVE TOUCH BY THE ROMANTIC PARTNER BUFFERS THE NEGATIVE EFFECT OF THOUGHT SUPPRESSION ON DAILY MOOD

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Emotion regulation is important for daily well-being and health. Emotions are regulated through intrapersonal (i.e., regulating one's own emotions) and interpersonal (i.e., regulating emotions in interaction with others) processes. The current study examines the interplay of an unfavorable intrapersonal emotion regulation strategy "thought suppression" with a favorable interpersonal emotion regulation strategy "responsive touch," in daily life. Both partners of 102 dating heterosexual couples simultaneously completed an electronic diary assessing their mood and how they dealt with their own and their partner's emotions four times a day during one week. Multilevel analysis revealed that thought suppression was associated with more negative mood not only in the suppressor but also in the romantic

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partner. Conversely, responsive touch was associated with more positive mood in both the receiver and the provider of this touch. Importantly, the negative effect of thought suppression was dampened by simultaneous responsive touch from the partner, which suggests a buffering effect of positive partner contact. This protection from the negative effects of maladaptive emotion regulation may point to a pathway through which close relationships contribute to better mental health.

Emotion regulation is crucial to one's well-being (Gross & John, 2003), and a majority of psychological disorders involves emotional dysregulation (Kring, 2010). Research on emotion regulation has received increased attention over recent years. A vast majority of these studies focused on intrapersonal processes of emotion regulation. However, there is a broad consensus that the regulation of emotions is only rarely a purely intrapersonal process (Butler & Gross, 2009; Coan, Schaefer, & Davidson, 2006; Rimé, 2007). On the one hand, other persons may play an important role in supporting individual's own emotion regulation (Gleason, Iida, Shrout, & Bolger, 2008). This process has been called extrinsic (Gross & Thompson, 2007), interpersonal or social emotion regulation (Marroquín, 2011); we refer to it as *interpersonal emotion regulation* and define it as emotion regulation processes that involves social interaction. On the other hand, the way one deals interpersonally with one's own emotions may affect one's interaction partners (Butler et al., 2003). The couple relationship is an ideal context to study the interpersonal dimension of emotion regulation, as it is characterized by high levels of emotional interdependence, psychological intimacy and emotionality (Simpson, Collins, Tran, & Haydon, 2007).

A distinction can be made between favorable and unfavorable emotion regulation processes (John & Gross, 2004). Trying to suppress one's thoughts has been discussed as a way to regulate emotions with paradoxical negative consequences, and it represents a risk factor for a number of psychological disorders (i.e., depression, obsessive-compulsive disorder; Wenzlaff & Wegner, 2000). In their initial study, Wegner, Schneider, Carter, and White (1987) instructed participants not to think about a white bear. Paradoxically, the very intent not to think of a white bear made participants think about a white bear even more. Such attempts to suppress a particular thought are likely to have important implications for emotional experience in daily life, yet they have rarely been studied in naturalistic contexts.

On the interpersonal level, positive and responsive couple exchanges have been identified as an adaptive strategy of emotion regulation, fostering the experience of positive feelings (Fincham, Stanley, & Beach 2007). Positive couple interactions have also been shown to buffer the negative impact of stressors (Cohen & Pressman, 2004). For example, Coan and colleagues (2006) demonstrated that holding hands buffered the impact of a stressor on mood and its neural and subjective correlates, suggesting that holding hands might operate as a way of interpersonal emotion regulation.

In the present study, we investigate how both an intrapersonal and an interpersonal ways of emotion regulation in romantic couples affect daily variation in mood. We focus on intra- and interpersonal correlates of thought suppression, and specifically of touching the partner (e.g., hugging, holding hands) as a particular way of being responsive to the partner's needs (hereafter referred to as responsive touch). Moreover, we seek to examine whether responsive touch from the partner buffers the negative impact of thought suppression. We thus investigate whether stroking the *white bear* of the partner can help make thought suppression a less harmful way of regulating one's mood.

THOUGHT SUPPRESSION AND MOOD

Thought suppression is an experiential avoidance strategy (Kashdan, Barrios, Forsyth, & Steger, 2006) that has negative effects on the suppressor. Mainly, it paradoxically increases the frequency of the suppressed thought (also termed rebound effect; Wegner et al., 1987) and leads to more negative intrusions and thus to more negative mood (Corcoran & Woody, 2009). Thought suppression is therefore considered a risk factor for psychological problems, and in particular for dysphoria or depression (Najmi & Wegner, 2008). Moreover, thought suppression requires effort and cognitive capacity. This further undermines one's ability to deal with other demands. The vast majority of studies on thought suppression were either conducted in an experimental setting or relied on retrospective questionnaire data. In a naturalistic context, thought suppression has hardly been studied. One study using an ambulatory assessment approach, however, investigated thought suppression in people with obsessive-compulsive disorder (Purdon, Rowa, & Antony, 2007). This study suggested that the amount of suppression

attempts and time spent with suppression interfered with participants' functioning (concentration, mood, peace of mind, and ability to proceed with planned activities).

INTERPERSONAL CORRELATES OF THOUGHT SUPPRESSION

The interpersonal effects of thought suppression is another topic that has not received much attention. Several aspects point to the possibility that thought suppression might have negative effects on the partner's mood. First, thought suppression is primarily an avoidance strategy, and these were reported to have negative effects for relationship partners. For example, the suppression of emotional expression was found to have negative effects on the interaction partner's stress level and on the relationship quality (Butler et al., 2003; Richards, Butler, & Gross, 2003). Second, the cognitive load of trying to suppress one's thoughts may compromise the suppressor's availability for positive and responsive interactions. Taken together, thought suppression might compromise satisfactory interaction with a close partner.

THE POSITIVE EFFECTS OF RESPONSIVE TOUCH

In contrast to the withdrawing aspect of thought suppression, being responsive implies approaching the partner (Laurenceau, Troy, & Carver, 2005). Responsiveness is a crucial element of relationship quality in couples. It is linked with more intimacy towards the partner (Debrot, Cook, Perrez, & Horn, 2012; Reis & Patrick, 1996), and with increased relationship quality and positive mood (Maisel & Gable, 2009). Responsiveness can be displayed in several ways, both verbally and non-verbally. However, in contrast to infant relationships, nonverbal behaviors in adult relationships have received little attention (Schachner, Shaver, & Mikulincer, 2005). Responsive touch, such as hugging, caressing or hand holding represents a way to express one's care. Touch is associated with improved mood (Burleson, Trevathan, & Todd, 2007; Coan et al., 2006), and the kind and amount of touch displayed in romantic relationships is unique (Rosenfeld, Kartus, & Ray, 1976) and reflects how serious and sincere a relationship is (Emmers & Dindia, 1995).

Responsive touch may not only have positive implications for the receiver but also for the touching partner. Lemay and Clark (2008) found that responsive individuals not only perceived the partner to be more responsive him- or herself, but they also evaluated the partner more positively and disclosed more. Touching one's partner might thus be an important way to communicate one's care in a nonverbal way (Debrot, Schoebi, Perrez, & Horn, 2013), and counteract more disengaging attempts of interpersonal emotion regulation.

RESPONSIVENESS AS A BUFFER OF THOUGHT SUPPRESSION

The main goal of this study is to examine the idea that the approach-oriented strategy of responsive touch (Laurenceau, Troy et al., 2005) buffers the effects of thought suppression. Positive social interaction may not only have stress buffering effects, but might also fill the gap left by socially disengaging behaviors: Puterman, DeLongis, and Pomaki (2010) have shown that to the extent that individuals perceived being emotionally supported, their daily rumination was no longer linked to negative affect. In a similar way, we expect that responsive touch might undo the effects of a partner's thought suppression attempts.

THE CURRENT STUDY

We examine this question using a dyadic variant of an e-diary method, in which both partners' data were gathered four times a day over seven consecutive days (Perrez, Schoebi, & Wilhelm, 2000). This procedure allows examining emotion regulation processes in a naturalistic setting and studying the situational associations of those strategies on the variability of current mood within both members of the couple. More specifically, we relied on the Actor-Partner Interdependence Model (APIM; Kenny, Kashy, & Cook, 2006) to examine three sets of hypotheses. It permits assessing both actor effects,[1] which represents how a person's independent vari-

1. Even though we use the term effect as is commonly the case when using the APIM, we refer here to associations between variables. In fact, we cannot draw causal conclusions based on the method used in this study.

able score affects their own dependent variable score, and partner effects, which represents how a person's independent variable score affect their partner's dependent variable score.

First, we expected that thought suppression was negatively associated with individuals' own mood (actor effect, H1a) and with that of their partner (partner effect, H1b). Next, we aimed to investigate the effects of responsive touch. We expected a positive association of responsive touch with the mood of the provider (H2a) and also with the mood of the beneficiary of the responsive touch (H2b). Finally, we examined whether responsive touch attenuated the negative effects of thought suppression by testing an interaction effect between responsive touch and thought suppression. We expected smaller effects of thought suppression on mood when thought suppression co-occurred with the partner's responsive touch, as opposed to situations when no responsive touch was reported (H3).

METHOD

Participants

Participants were recruited within a larger project on interpersonal emotion regulation in couples, via e-mails sent to different universities and colleges of the German-speaking part of Switzerland. We also displayed posters, flyers, and announcements in student journals. The participation criteria were to be in a heterosexual committed relationship for at least three months, to be unmarried, and to be aged between 18 and 40 years. Moreover, the partners had to meet face-to-face a minimum of three occasions per week. Two hundred four individuals (102 couples) provided sufficient data and were included in the analyses. The mean sample age was 25.40 years (SD = 5.08). Participating couples were dating for about three years on average (M = 35.48 months, SD = 32.31). A total of 43.3% of the couples were cohabitating and overall, 90.0% reported regular overnight stays in the same room (including non-cohabitors). Only four couples reported having children. The majority of the sample had finished high school or higher education (89.8%) and 27.0 % had a master's degree. More than half of the participants (54.4%) were students and 45.6% were employed.

Procedure

Couples willing to participate in the study were first screened for meeting inclusion criteria by phone or e-mail. At an initial laboratory session, they provided informed consent, filled in an initial questionnaire packet (the current study makes no use of those data), and were instructed in the use of the e-diary. With respect to the e-diary, couples selected a week considered as representative of their everyday lives (i.e., when no holidays, vacation, visits, or other special events were expected). At a second meeting, participants completed a second questionnaire packet and were interviewed regarding their experiences with the e-diary procedure. Couples were rewarded the equivalent of $100 US for full participation in the study.

E-Diary Procedure. The e-diary was implemented on palm-top computers that prompted reports with an acoustic signal four times per day for a period of seven consecutive days (i.e., up to 28 measurement points). Reports were programmed to be simultaneous for both partners, but otherwise randomly assigned within a 30 min. time window around 9 a.m., 1 p.m., 5 p.m., and 9 p.m. Answering was possible during a two-hour time lag after the signal. Participants responded at 91.4% of the time points. The mean response latency after the signal was nine minutes and three seconds.

E-Diary Measures

Mood. At all sessions, participants rated the valence of their current mood. They were asked: "How do you feel in this moment?" and could answer by means of two bipolar 9-point scales, ranging from Unwell to Well, and from Discontent to Content (Wilhelm & Schoebi, 2007). The averaged score of both bipolar items at each report of each participant served as mood variable. Participants' average mood over the assessment week ranged from 3.74 to 8.61 (M = 6.55, SD = .87); gender difference was not significant, paired $t(101) = 1.08$, $p = .28$.

Thought Suppression. At each report, participants were asked how they had dealt with their emotional state since the last session (at the first report of the day and since waking up). A set of sixteen intrapersonal emotion regulation strategies was proposed (i.e., emotional suppression, positive or negative reappraisal, humor, etc.),

asking: "How did you deal with your affective state?" Thought suppression was assessed with the item: "I have tried to suppress my thoughts." The item was rated on a 5-point scale (from 0 = does not apply to 4 = applies very strongly). As expected, the item was used infrequently, resulting in a relatively low average rating per person (average of individuals' means rating: M = .48, SD = .44), and a skewed distribution with a high frequency of reports where the item was not endorsed. We therefore dichotomized this item to reflect whether participants reported any suppression attempts (=1) or not (=0; thought suppression dummy). On average, people reported suppression at 6.82 of the 28 measurement points, SD = 5.08; no gender difference; paired $t(101) = 1.29$, $p = .20$. Seventeen participants (8,33% of the sample) did not provide any reports of suppression and were therefore not included in the analyses.[2]

Responsive Touch. In 71.2 % of the occasions, participants reported having been in contact with their partner since the last report (at the first report of the day: since waking up). In this case, they were presented with a list of 16 statements reflecting interpersonal emotion regulation strategies, including: "Since the last session, in response to my partner's emotional state, I have hugged, caressed, or physically approached him/her." The item was rated on a 5-point scale (0 = does not apply to 4 = applies very strongly). This item was endorsed frequently, and participants' averaged ratings ranged from .29 to 4.00 (M = 2.55, SD = .88). Women reported significantly more responsive touch than did men, paired $t(101) = 2.81$, $p < .01$.

Analytic Strategy

The current data features multiple dependencies arising from repeated measurements of each participant, and from the fact that participants were grouped in couples. To accommodate these data characteristics, we relied on a dyadic multilevel modeling approach, using the MLwiN computer program (Rasbash, Charlton, Brown, Healy, & Cameron, 2009). We used a two-level APIM with two intercepts (one for the female and one for the male partner; Kenny et al.,

2. These seventeen participants did not differ meaningfully from the sample on the study variables, except on mood, which was significantly better, $t(202) = 2.81$, $p < .01$, M = 6.55, SD = .80, than the remaining participants (M = 7.30, SD = .80). Nevertheless, as the present study investigates associations within the person (Level 1 variance), they could not contribute to the results as their data do not feature within-subject variance.

2006). In this approach, female and male partners have their own parameter, and partners' daily reports (Level 1) are treated as nested within couples (Level 2; Laurenceau & Bolger, 2005). To capture dependencies in the dependent variable due to the nested structure of the data, the partners' residuals were allowed to be correlated across time and couples.

The present hypotheses concerned associations within subjects, and between the two partners of a couple. To assess these within-subject associations and to remove the effect due to the person's general tendencies, we centered the touch variable at the participant's mean of that variable across all his or her measurements, thus omitting between-subject variation from the variable. We included both partners' mean on the thought suppression variable in the model to adjust for partners' general tendency to suppress thoughts. We also included the participants' mood at the previous time point, thus rendering the outcome residualized change in mood that occurred since the past report.

We also considered several potential confounding variables. In order to evaluate systematic changes in the outcome (Bolger, Davis, & Rafaeli, 2003), we entered the time-related variables: rank of the reports,[3] weekdays vs. weekends and time of the day. The effect of rank of the reports was not significant (b = .002, SE = .004, p = .62) and therefore dropped from the final models.

The Level 1 model for the prediction of mood changes by both partners' thought suppression and responsive touch is shown in Equation 1. For simplicity reasons, we display only one partner's parameters:

$$Mood_{ij} = b_{0i} + b_{1\text{-}1i}(\text{prior mood}) + b_{2j}(\text{own thought suppression}) + b_{3j}(\text{partner thought suppression}) + b_{4j}(\text{partner responsive touch}) + b_{5j}(\text{own responsive touch}) + b_{6j}(\text{own thought suppression} \times \text{partner responsive touch}) + e_{ij}(1)$$

$Mood_{ij}$ is the valence of the mood of a partner from couple j at time i. The estimate for b_{0j} is the intercept and represents the participant's average mood, adjusted for all predictors in the model. The estimate for $b_{1\text{-}1j}$ captures the association of actor's mood at the previous report with current mood (autocorrelation). The estimate for b_{2j} re-

3. This variable differentiates each report beginning with the first report coded as 1 and the last coded as 28. This allows assessing systematic changes over the assessment week.

flects the actor effect of thought suppression on mood. The partner effect of thought suppression on the romantic counterpart's mood is represented in b_{3j}. The estimate for b_{4j} captures the partner effect of responsive touch while b_{5j} reflects the actor effect (own responsive touch on own mood). The estimate for b_{6j} represents the interaction effect between own thought suppression and partner responsive touch. Finally, e_{ij} is the level-1 error term.

A model with main effects only was first examined and the interaction term was added in a second step. We probed interactions and determined simple slopes and regions of significance using procedures provided by Preacher, Curran, and Bauer (2004).

RESULTS

Univariate and Bivariate Analyses

The means and standard deviations for male and female partners, based on aggregates of daily reports, are reported in Table 1. Pearson product moment correlations between variables aggregated at the level of couples are also presented in Table 1.

Multilevel Modeling

Main Effects: Thought Suppression and Responsive Touch. We first computed a likelihood ratio test (Rabash, Steele, Brown, & Goldstein, 2009) of models with and without constraints for parameters of women and men to test potential gender differences. We found no evidence for any gender difference for main effects, $\chi^2(1) < 2.09$, $p > .14$. Because no gender differences were expected (MacGeorge, Graves, Feng, Gillihan, & Burleson, 2004) nor found, all parameters were set equal across gender.

Examination of main effects revealed that the effects of average thought suppression, reflecting an association between participants' inclination toward thought suppression and average mood, were not significant, neither for the actor (b = -.415, SE = .314, p = .43) nor for the partner effect (b = .049, SE = .31, p = .77). However, when participants indicated having used thought suppression at a particular report, they also reported worse mood[4] (b = -.864, SE =

4. Participants were asked to indicate their mood at the present moment and whether they had tried to suppress thought in the four preceding hours. Therefore, mood was either concurrent with thought suppression or followed its intent.

TABLE 1. Intercorrelations Between Men and Women's Aggregated Scores (Pearson's r).

Whole Sample's Mean	Mean	*SD*	1	2	3	4	5	6	7
1. Valence of Mood W	6.61	0.84							
2. Valence of Mood M	6.50	0.90	**.26***						
3. Thought Suppression W	0.50	0.44	–.27*	0.02					
4. Thought Suppression M	0.56	0.43	**–0.11**	–.44***	**0.17**				
5. Thought Suppression SUM W	6.38	4.91	–.28*	0.07	.92***	**0.17**			
6. Thought Suppression SUM M	7.24	5.22	**–0.17**	–.33**	**0.19**	.85***	**.27***		
7. Responsive Touch W	2.66	1.35	0.11	**.24***	0.10	**0.08**	0.18	**0.07**	
8. Responsive Touch M	2.37	1.47	0.15	.44***	**0.12**	–0.01	**0.21**	0.07	**.68****

Note. *N* = 102 men and 102 women. We present the correlations between the dyad members in bold. *M* = men; W = women. SUM = sum of the dichotomized reports of thought suppression over the assessment week. Thought suppression is measured on the ordinal variable over the assessment week. *$p < .05$; **$p < .01$; ***$p < .001$ (two tailed).

TABLE 2. Effects of Actor and Partner Thought Suppression and Responsive Touch on Current Mood

	Current Mood		
	b	***SE***	***p* Value**
Intercept	5.825	0.210	0.000
Previous Mood	0.146	0.020	0.000
Actor Thought Suppression (Dummy)	–0.859	0.079	0.000
Partner Thought Suppression (Dummy)	–0.242	0.083	0.022
Partner Responsive Touch	0.111	0.033	0.000
Actor Responsive Touch	0.269	0.029	0.000
Actor TS × Partner RT	0.169	0.067	0.034
Actor Mean Thought Suppression	–0.413	0.315	0.386
Partner Mean Thought Suppression	0.048	0.310	0.249

Note. N = 102 men and 102 women. SE = Standard error; TS = thought suppression; RT = responsive touch. Mean thought suppression represents the average thought suppression on the ordinal variable over the assessment week. Thought suppression (dummy) represents the effect of thought suppression assessed using the dichotomized variable.

.079, $p < .001$), and so did the partner (b = -.233, SE = .083, $p < .05$). The data thus provided support for hypotheses H1a and H1b. Testing actor and partner effects of responsive touch on mood yielded similar results. Confirming H2a, displays of responsive touch were significantly associated with one's own mood (b = .268, SE = .029, $p < .001$). Responsive touch by the partner was significantly associated with better mood (b = .15, SE = .029, $p < .001$), thus supporting hypotheses H2b.

Interaction: The Stress-Buffering Effect. In our next step, we added the interaction term between reports of thought suppression and the partner's report of responsive touch. We found no gender difference in the interaction term, and when all effects were set equal across gender, no difference was suggested, $\chi^2(10) = 7.15$, $p = .41$. Adding the interaction term did not alter the significance level of the previous described associations. Table 2 presents the results of the model. A significant effect of the interaction term suggested that partner's responsive touch modulates the associations between own thought suppression and own mood (b = .169, SE = .067, $p <$ .01). This result supported H3: the association of thought suppression with a more negative affective state was attenuated in the presence of responsive touch by the partner, as compared to situations where no touch was provided by the partner.

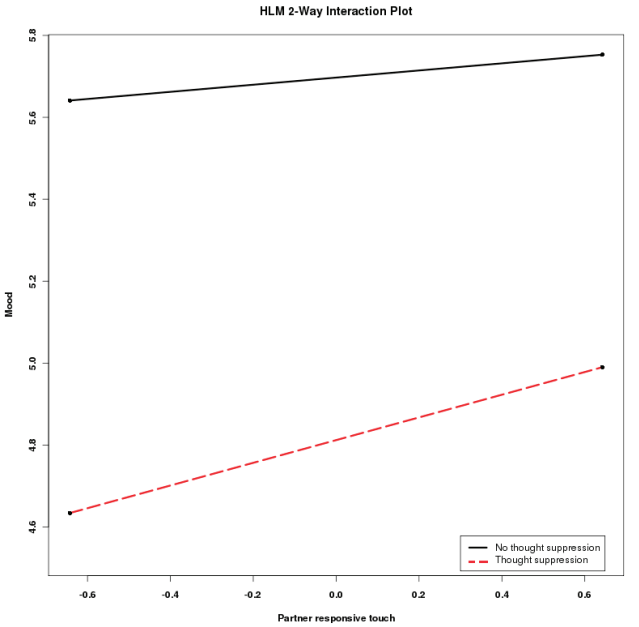

FIGURE 1. Mood as a function of partner's responsive touch and own thought suppression. Mood ranged from 0–9; thought suppression ranged from 0–4, and was transformed into a binary variable that indicates whether or not thought suppression occurred.

Probing the interaction revealed that the touch effects were significant for both possible values of thought suppression (region of significance ranges from -2.78 to -0.09). This means that partner touch was associated with mood irrespective of thought suppression. As illustrated in Figure 1, when thought suppression was not reported (thought suppression = 0), the slope of the effect of partner responsive touch on own mood was .09 (p = .012); when thought suppression was reported (thought suppression = 1), the simple slope was far stronger with 0.28 (p = .002). This means that partner responsive touch buffered the association between thought suppression and mood.

DISCUSSION

In the present study, we used an e-diary approach to target within-person processes unfolding from situation to situation in a natural-

istic context. It is important to mention that this study uses a correlational approach that does not allow for strong causal interpretations (Conner & Lehman, 2012). Nevertheless, our results revealed data patterns that are likely reflective of important emotion regulation mechanisms involving intrapersonal as well interpersonal processes.

We examined the daily association of thought suppression with changes in the suppressor's mood as well as with their partner's mood. In addition we examined possible beneficial effects of the partner's responsive touch, first as a main effect on mood, and second, as an interaction effect with thought suppression, reflecting buffering of thought suppression effects by partner responsive touch. In this way, this study addresses the interplay of intra- and interindividual emotion regulation and underscores the protective potential of positive interpersonal processes.

THOUGHT SUPPRESSION NEGATIVELY AFFECTS ONE'S OWN DAILY MOOD

Our results support the proposition that thought suppression is associated with more negative mood in daily life. Report of thought suppression was reliably associated with worse mood. This association can be observed even when controlling for the mood at the previous session, which indicates that thought suppression was not merely a temporal consequence of earlier mood. This result based on data from naturalistic settings corroborates existing knowledge from experimental (Wegner et al., 1987) or retrospective data (Wenzlaff & Luxton, 2003) about the negative impact of thought suppression on mood, showing immediate effects within person in everyday life in a nonclinical sample (Purdon et al., 2007). The results remained significant above and beyond the individual general tendency to suppress thoughts.

Our study provides support for the view that thought suppression is a dysfunctional emotion regulation strategy (John & Gross, 2004). It provides tentative evidence on a potential link between thought suppression and risk for psychological distress and in particular for depression (Najmi & Wegner, 2008), showing at a microanalytical level that thought suppression is associated with dysphoria. Further research might explore how, in addition to the cognitive load that thought suppression puts on the suppressor, emotional

distress additionally reduces resources to deal with a close partner and other demands.

INTERPERSONAL CONSEQUENCES OF THOUGHT SUPPRESSION

Our data revealed that when individuals tried to suppress their thoughts, this negatively impacted their partner's current mood. Thought suppression not only has negative consequences for the individual itself, as shown by prior research, but our data provides initial evidence that this negative potential extends to the interpersonal domain. These results for thought suppression dovetail with earlier findings on interpersonal costs of expressive suppression (Butler et al., 2003; Richards et al., 2003). Our work further emphasizes the importance of taking the relational context of emotion regulation into account (Butler & Gross, 2009).

We are far from a complete understanding of the potential mechanisms underlying the negative association between thought suppression and partner mood. A first potential explanation is that suppression makes the suppressor less available for the interaction. Thought suppression requires effort and puts cognitive load on the suppressor (Wenzlaff & Wegner, 2000). Therefore, the suppressor is likely distracted and less available for responsive and intense exchanges with the partner. Trying to suppress one's emotional expression was found to decrease the suppressor's responsiveness, leading to physiological correlates of distress in the partner (Butler et al., 2003). The effort of suppressing one's thoughts may also interfere with adequate communication and disclosure—or the sharing of one's experience with a partner—an important aspect of the intimacy and satisfaction in romantic couples (Laurenceau, Feldman Barrett, & Rovine, 2005; Vittengl & Holt, 2000). Investigation of potential effects of thought suppression on self-disclosure could clarify this possibility. Finally, as thought suppression depletes cognitive capacity, this may impede the ability to inhibit the expression of negativity toward one's partner as control resources are lacking. In fact, other studies showed that depletion of self-regulating resources impaired adequate self-disclosure (Vohs, Baumeister, & Ciarocco, 2005).

EFFECT OF RESPONSIVE TOUCH ON THE PARTNER'S MOOD

When individuals reported having touched their partners responsively, the latter experienced a positive change in mood, above and beyond earlier mood during the day. This finding points to the favorable emotion regulation aspect of touch in couples' daily lives (Coan et al., 2006). Furthermore, this result emphasizes the importance of responsiveness in romantic relationships (Gable & Reis, 2006; Reis & Patrick, 1996) and extends it to a particular form of showing it, namely by touching the partner. It has been proposed that nonverbal aspects of responsiveness have particular importance for the quality of attachment relationships (Schachner et al., 2005). This study supports and amplifies this view: it might not only be relationship quality that is altered but also—on the individual level—the affective state.

EFFECT OF RESPONSIVE TOUCH ON OWN MOOD

As expected, displaying responsive touch in daily life was associated with enhanced own mood, showing that interpersonal emotion regulation processes have intrapersonal consequences (Butler & Gross, 2009). Being responsive was shown to be linked with several positive outcomes for the actor (Lemay & Clark. 2008), and the current data suggest that this extends to one's mood. Responsive touch, also when initiated by oneself, offers an intimate and potentially rewarding experience for both partners. In fact, similar positive effects of giving a positive physical contact have been found elsewhere. For example, elder volunteers had reduced their own anxiety and depression after giving a massage to infants (Field, Hernandez-Reif, Quintino, Schanberg, & Kuhn, 1998).

THE BUFFERING EFFECT OF RESPONSIVE TOUCH

Finally, and most central to the present study, the data suggest that the association of thought suppression with negative changes in mood was buffered in situations when responsive touch was reported by the romantic partner. This finding conforms to the stress-buffering hypothesis of positive interpersonal processes on mal-

adaptive intrapersonal regulation strategies (Cohen & Pressman, 2004; Meuwly et al., 2012; Puterman et al., 2010). Furthermore, it corresponds with the assumed association between approach toward intimacy in romantic relationships and positive affect (Laurenceau, Troy et al., 2005).

The present results are based on data gathered several times a day in couples' daily lives, relying on micro-analytical reflections of those daily processes (Reis, 2012). This allows looking at subtle short-term effects of emotion regulation on current mood within the person. As general tendencies of individuals were controlled, the question whether group differences between persons and couples who touch and suppress thoughts frequently in general was not the focus of this study. Rather, situational associations in different daily contexts of the participants were studied. The significant interaction effect can be interpreted as preliminary evidence that, in situations in which being touched by the partner co-occurs with thought suppression, the negative consequences of thought suppression on negative mood are dampened.

This finding suggests further reflection about possible underlying mechanisms: Touch is associated with feelings of intimacy (Debrot et al., 2013; Thayer, 1986). An increase in intimacy seems to be more important to a couple's well-being than a decrease in conflict (Laurenceau, Troy et al., 2005). Possibly, approach behavior by the partner and the positive sense of feeling bonded has a soothing effect that enables individuals to substitute avoidant emotion regulation strategies for more constructive ways of reflecting upon their emotional state. Thus, responsive touch may impede the suppressor from entering a maladaptive cycle of rumination (Wenzlaff & Luxton, 2003), which is known to be detrimental for mood (Moberly & Watkins, 2008) and to be involved in depression (Nolen-Hoeksema, 2000). Moreover, through its calming effects on physiological stress-sensitive systems (Holt-Lunstad, Birmingham, & Light, 2008), a positive partner touch may act on the stress that goes along with thought suppression (Corcoran & Woody, 2009). The buffering effect of touch could also be established through distraction. Several authors have proposed that distraction may be an effective emotion regulation strategy (e.g., Kalisch, Wiech, Herrmann, & Dolan, 2006). The availability of positive distractors has been shown to be an effective alternative to decrease the cognitive load inherent to thought suppression and to increase mental control (Beevers, Wenzlaff, Hayes, & Scott, 1999). Positive interaction with a romantic partner,

like responsive touch, is likely a powerful and positive distractor. Further research that examines experiential correlates of touch may help to clarify possible mediators of these effects.

LIMITATIONS AND FUTURE DIRECTIONS

Some limitations of the current study warrant attention. First, even if the results are based on data assessed in the temporal order of the target mechanisms, it is not possible to draw causal conclusions, and reverse causal associations might also be plausible. Concerning the association between thought suppression and the negative change in mood, the temporal direction of the effect is not addressed empirically: the worsening of mood could represent a need for regulation leading to more probable use of emotion regulation strategies. Similarly, one may display more responsive touch to the partner when mood had improved. However, it should be noted that having controlled for previous mood adds validity to the assumption that thought suppression is partly responsible for the change negative mood and responsive touch for the change positive mood above and beyond their baseline at the previous point of measurement. In fact, precedence can be assumed from the present association, a necessary but insufficient condition of causality (Conner & Lehman, 2012).

Second, participants were all young, and predominantly students from a western cultural context. Touch is most frequent in this stage of the relationship (seriously dating; Emmers & Dindia, 1995). Moreover, the sample was composed of nondistressed couples. Our results may not generalize to samples from other cultural backgrounds, which may be characterized by culture-specific differences in emotional interdependence between partners (Schoebi & Perrez, 2012). Additionally, they may not generalize to other kinds or stages of romantic relationships or to people of older age.

Third, the size of the effects were moderate. Additional work is necessary to validate the practical or potential clinical significance of the found associations. Considering the amount of potential sources of influences on mood in a daily context, and the number of factors that were controlled for in this study, we estimate, however, that the associations found here do impact the actor and partner emotional state meaningfully.

Fourth, we did not collect any information on the content of the suppressed thoughts. It would be interesting to know whether (a) these thoughts are primarily negative and (b) concern relationship or partner issues. Fifth, the data rely on self-reports. Further experimental studies might shed more light on the interacting association of touch and thought suppression with mood. Finally, participants who did not report having suppressed their thoughts over the whole assessment period were dropped as they could not contribute to the results. As they showed a higher average mood, the results are only interpretable as reflecting situation-to-situation associations of emotion regulation and mood within couples in which at least one partner uses the strategy of thought suppression at all. Maybe the subsample of participants that never reported any thought suppression represents a group of particularly emotionally competent participants that was not considered in the current analyses.

CONCLUSION

The present study adds knowledge to the field of emotion regulation and relationship research. In the daily life of romantic couples, intrapersonal and interpersonal emotion regulation have several notable associations. The present results show how specific emotion regulation strategies show associations with current mood across different situations in both partners. These results highlight the importance of studying emotion regulation processes in the context of relationships to relevant others (Butler et al., 2003) and in daily, naturalistic circumstances. It also points to the protective role that positive relationship processes can play to compensate for dysfunctional emotional reactions. This goes in line with recent developments in the treatment of affective disorders: Beach, Dreifuss, Franklin, Kamen, and Gabriel (2008) recommend utilizing several couple therapeutic interventions in order to enhance mutual support in couples with a depressed partner as an adjunct of individual psychotherapy. Emotional dysregulation is a common feature in psychological disorders. This study shows that dysphoric states in daily life are associated not only with maladaptive emotion regulation in the individual but also with interpersonal processes in the couple. Future research in this direction, confirming and extending our current work, may contribute to promising developments for intervention.

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