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The Feeling of the Story: Narrating to Regulate Anger and Sadness

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Abstract

Admonitions to tell one's story in order to feel better reflect the belief that narrative is an effective emotion regulation tool. The present studies evaluate the effectiveness of narrative for regulating sadness and anger, and provide quantitative comparisons of narrative with distraction, reappraisal, and reexposure. The results for sadness ($n = 93$) and anger ($n = 89$) reveal that narrative is effective at down-regulating negative emotions, particularly when narratives place events in the past tense and include positive emotions. The results suggest that if people tell the "right" kind of story about their experiences, narrative reduces emotional distress linked to those experiences.

The idea that telling a story about a sad or angry event helps us to feel better is a powerful one. People are more likely to tell and retell stories about events laden with negative emotions (Pasupathi, McLean, & Weeks, 2009; Rimé, Finkenauer, Luminet, Zech, & Phillipot, 1998), and report narrating such experiences to other people for the purpose of feeling better (Pasupathi, 2003; Nils & Rimé, 2012). A growing body of evidence links the act of narrating important experiences, and individual differences in the way people do so, to differences in psychological well-being (McLean, Pasupathi, & Pals, 2007; Smyth & Pennebaker, 2008). This work suggests that narration is associated with less distress, as reflected in lower reported depression and higher reported well-being. Narrating events also changes how people recall those events (e.g., Pasupathi & Hoyt, 2010; Tversky & Marsh, 2000), suggesting the potential for narration to reduce event-related distress in lasting ways. Despite the prevalence of this assumption and substantial indirect evidence (reviewed below), there are few direct, experimental tests of narrative as an emotion regulation strategy.

The studies reported below examined whether narrating can effectively reduce sadness (Study 1) and anger (Study 2), both concurrently and when people are subsequently reminded of an event. We also examined whether specific linguistic features of narratives are associated with more effective reduction of distress (Study 3). To provide benchmarks for assessing the effectiveness of narrative, we also examined two established emotion regulation strategies: reappraisal and distraction. We defined emotion regulation as individuals' efforts to alter the experience and the expression of their emotional responses (Gross, 2001). We operationalized emotion regulation in terms of different strategies, and

examined the effect of these different strategies on self-reports of subjective emotional experience (e.g., Kross & Ayduk, 2008; Rottenberg, Ray, Gross, Coan, & Allen, 2007).

Narrative as a strategy for emotion regulation

Narrative may be effective for regulating emotions for several reasons. First, narratives allow for the expression of emotion. Suppression of emotion doesn't reduce, and can increase, emotional distress, whether subjectively reported or indicated by physiological arousal (e.g., Gross, 2001). Thus, by promoting the expression of emotions, narratives may help reduce distress (Smyth & Pennebaker, 2008; Stanton & Low, 2012). Second, narratives offer the potential for positive, growth-related meaning-making. This type of meaning-making entails connecting negative experiences to positive outcomes such as greater maturity or insights, and has been linked to greater well-being (McLean et al., 2007; Pals, 2006). Positive meaning-making does involve reinterpreting the negative event as having led to positive consequences in ways that likely render the experience less distressing. Such meaning-making is also connected to the regulation strategy of reappraisal, as we discuss later. Third and most unique to narrative, creating a coherent story requires ordering events in time and constructing an end for the event (Bruner, 1990), thereby reducing the intensity of emotions associated with recalling the event (Ross & Wilson, 2002). In addition to expressing negative emotions, enabling positive meaning-making, and providing closure, narrating an experience influences memory for the narrated event (Pasupathi & Hoyt, 2010). Thus, constructing narratives that make an experience less distressing may also result in lasting changes to memory that in turn render future reminders of the event less distressing.

Empirical Evidence

Findings linking expressive writing to health and well-being (e.g., Smyth & Pennebaker, 2008; Stanton & Low, 2012) provide indirect evidence that constructing narratives might help regulate emotion. Expressive writing studies typically ask participants to write about their deepest thoughts and feelings around the most stressful or traumatic event of their life, while control participants write about neutral or unemotional topics. In the long term, expressive writing is consistently linked to improved physical and psychological health (Smyth & Pennebaker, 2008; Stanton & Low, 2012). However, though physical health and wellbeing may be related to emotion regulation, they are clearly distinct from it. Researchers have not examined whether expressive writing makes people less distressed about the issues they wrote about, and immediately after writing, people sometimes report greater distress (e.g., Murray & Segal, 1994) and other times reduced distress (Barclay & Skarlicki, 2009); it is not clear whether expressive writing would be related to less distress when people are reminded of the events they wrote about. More generally, expressive writing has never been compared to other emotion regulation strategies. Our present focus was on whether constructing a narrative about an emotionally negative event might effectively reduce negative emotion, rather than on broader implications of narrating traumatic events for health and other outcomes. A full test of this question requires considering narrative as an emotion regulation strategy.

Direct tests of narrative as an emotion regulation strategy have tended to be methodologically flawed and yield mixed findings. Such studies often compare emotions reported for the initial experience, retrospectively, with emotions rated during or after narrating. People sometimes report feeling less negative about experiences that they have narrated (Pasupathi, 2003), but not always (Rimé et al., 1998), and such designs suffer from retrospective biases in emotion ratings. Prior work also confounds the effects of constructing a story – narrating – with those of social support and the passage of time because the primary focus of such work is on disclosure to other people, rather than narrative itself (Rimé et al., 1998; Skowronski, Gibbons, Vogl, & Walker, 2004).

The present studies evaluate whether narrative construction can reduce negative emotions about an experience using experimental methods adopted from the emotion regulation literature. A typical experiment in emotion regulation asks individuals to view an emotion-inducing film clip or recall an emotional memory, and randomly assigns people to use a particular regulation strategy during the emotion elicitation task. The effectiveness of the strategy is indicated by measures of subjective emotional experience (e.g., Ray et al., 2008).

This approach for looking at narrative raises additional issues. First, because emotional events are typically narrated to others soon after they occur (Pasupathi et al., 2009; Rimé et al., 1998), an experiment using memories as emotion elicitation leaves open questions about whether effects of narration are due to narration in the experiment or to prior narration. To address this, we elicit emotion via two methods: personal memories of sad or angry events and standardized film clips known to elicit said emotions. We included both types of elicitations as a within-participant replication and extension, and because use of film clips allowed us to examine emotion regulation around a standardized emotional event that had not previously been narrated. Second, to better understand whether narrating downregulates negative emotions, it is useful to compare narration with two other established, and more fully researched, emotion regulation strategies: distraction and reappraisal.

Comparing Narrative to Distraction and Reappraisal

Distraction involves diverting attention away from a distressing event towards a neutral or positive stimulus (e.g., Gerin, Davidson, Christenfeld, Goyal, & Schwartz, 2006; Strick, Holland, van Baaren, & van Knippenberg, 2009). In our studies, we asked participants to narrate a positive experience as a distraction task. In addition to diverting attention away from the negative event and towards a positive stimulus, using a narrative task as a distraction also allows us to ensure that any effects observed in the narration condition are not due to processes of narration in general, but are specifically related to narrating the emotionally negative experience.

Reappraisal is defined as thinking about events in ways that change their emotional impact (Kross & Ayduk, 2008; McRae, Ciesielski, & Gross, 2012). Typical reappraisal tasks ask participants to think about the film clip or memory in a way that allows them either to ‘feel nothing’ (e.g., Ray, Wilhelm, & Gross, 2008) or to ‘find something positive’ in the stimulus event (e.g., McRae et al., 2012). Instructions to find something positive appear to promote positive emotions rather than reduce negative emotions (McRae et al., 2012) and are conceptually linked to narrative meaning-making in ways we consider in the discussion. For

the present studies, we chose the task more directly linked to reductions in negative emotion (i.e. “to feel nothing”), and less directly linked to benefit finding and positive meaning-making.

Both distraction and reappraisal have been shown to be effective strategies for downregulating negative emotion while people engage in them (e.g., Kross & Ayduk, 2008; Macnamara, Ochsner, & Hajczk, 2011; Gerin et al., 2006; McRae, Misra, Prasad, Pereira, & Gross, 2012; Strick et al., 2009), though some studies suggest that distraction is less effective than reappraisal (McRae, Misra, et al., 2012). Reappraisal and distraction differ, however, in the extent to which they result in lasting reductions in distress. Theoretically, reappraisal requires people to come to a changed perspective on an emotional event that may last over time (e.g., Kross & Ayduk, 2008; McRae et al., 2012). By contrast, distraction does not change the meaning of an event, and is likely to be effective only while the person is engaged in distraction. Indeed, empirical work shows that reappraisal is effective at reducing negative emotion in lasting ways while distraction is not (Adam et al., 2014; Kross & Ayduk, 2008; Macnamara et al., 2011; Thiruchselvam et al., 2011).

Most studies have examined the lasting effects of reappraisal and distraction only within the same experimental session (e.g., Thiruchselvam et al., 2011; Adam et al., 2014; MacNamara et al., 2011). One exception, by Kross and Ayduk (2008), demonstrated that distancing reappraisal reduced depressive affect in relation to a personal experience both 1 and 7 days after participants had reappraised, while distraction did not show lasting effects. Based on this work as well as the lasting effects of narration reviewed earlier, we expected reappraisal and narrative to be effective in lasting ways, and distraction to be effective only concurrently.

Individual Differences in Narration

People vary in the types of narratives they construct about negative life events, and this represents an additional complexity in studying narrative strategies. Narratives that fail to articulate and explore the negative experience, or do not create the possibility of growth or a sense of closure and ‘past-ness’ about the event, are not associated with higher levels of well-being (Lilgendahl & McAdams, 2011; McLean et al., 2007). Relatedly, expressive writing is more effective for those participants whose writing over time involves increases in positive emotion language and in cognitive language (e.g., Smyth & Pennebaker, 2008).

As a consequence, narrating may not be as effective on average as other emotion regulation strategies, because of the heterogeneity in the way people construct narratives, with only some individuals showing effective regulation via narrative. To explore this issue more fully, we oversampled the narrate conditions in studies 1 and 2. In study 3, we combined the narrate participants across studies 1 and 2 to look at whether individual differences in the contents of participants’ narratives were linked to the effectiveness of narrative in downregulating distress. This represents a strong evaluation of links between specific ways of narrating emotional experiences and whether narrating effectively reduces emotional distress.

The Present Studies

The current studies had the following goals. First, they examined the effectiveness of narration for down-regulating self-reported anger and sadness. Second, they did so in comparison with reappraisal and distraction. Because narration and reappraisal also require that participants revisit the negative event, we included a mere reexposure control condition to evaluate whether any effects found for narrative and reappraisal could be accounted for by desensitization. We examined the effectiveness of down-regulation both concurrently (while engaged in the assigned emotion regulation strategy), and over two reexposures to the emotional experience (immediately after regulation, and at a 1-week delay). Study 1 focused on sadness and Study 2 on anger. Third, we examined whether variations in the contents of narratives were associated with greater effectiveness of narration in a reanalysis of data combined from both studies.

We anticipated that during regulation, narrative, reappraisal, and distraction would all be effective at reducing negative emotion compared to the initial emotion elicitation, while the reexposure control condition would not (H1). We also hypothesized that participants in the narrate and reappraise conditions would show lasting reductions in subjective negative emotion over subsequent reexposures, whereas those in the distract and reexposure control conditions would not show lasting reductions (H2). Further, we anticipated that the narrative condition might be less concurrently effective than reappraisal and distraction, in part because people vary in the extent to which their narratives are likely to effectively reduce distress. As a consequence, we expected higher reports of negative emotion during the regulation phase in the narrate condition, compared to the reappraise and distract conditions (H3).

Study 1- Regulation of Sadness

Method

Participants—One hundred and two young adults between the ages of 18 and 30 years were recruited from the student participant pool and community locations in a Rocky Mountain metropolitan area. Data for 9 participants were excluded due to data collection errors or failure to participate in both sessions, leaving a final sample of 93 participants (49 males, M age = 21.9, SD age = 3.35). Sixty-one percent of the sample identified as European American, 19% as having multiple ethnicities, 8% as Latino/a, 4% as Asian American, and the remainder identified as “other” or did not respond. Community members were paid \$20 for completing the first session and \$25 for completing the second session; students from the participant pool received course credit or pay according to preference. Participants were randomly assigned to a regulation condition, with roughly equal distribution of males and females across conditions. However, we oversampled the narrate condition given our expectation of individual differences in narrative quality (narrate, n = 32, reappraise, n = 20, distract, n = 20, and reexposure, n = 21). Presentation order of stimuli (memory or film first) was counterbalanced across participants. A priori power analyses conducted using Gpower (Erdfeiler, Faul, & Buchner, 1996) suggested that this sample was adequate for detecting moderate-to-large effects with power of .80.

Measures—Self-reports of sadness, on a scale from 1 (not at all) to 7 (extremely), constituted the primary measure for the study (single item emotion ratings are consistent with previous work; Ray et al., 2008). These self-reports were obtained at the end of each epoch in Sessions 1 and 2, as indicated in Figure 1. Participants also reported the extent to which they felt angry, scared, guilty, ashamed, and happy on the same scale. Ratings of these emotions at baseline and elicitation provide evidence of discriminant validity for our single-item rating of sadness; ratings of these emotions during other epochs are not discussed.

As a partial manipulation check, we asked participants to identify which of four tasks they had been asked to do; each task corresponded to one of the regulation conditions. Participants also reported how long ago their sad memory had occurred (with responses categorized as (1) less than one week ago, (2) one week to one month ago, (3) one month to six months ago, (4) six months to one year ago, or (5) more than one year ago).

Data collected but not included in the present study: As part of exploratory work examining psychophysiological aspects of emotion and narration, we also assessed physiological measures throughout the session: heart rate, respiration rate, respiratory-sinus arrhythmia (RSA), and skin conductance levels. These measures are uncorrelated with self-reported emotion and are not included in the present study. Further, at the end of Session 2, participants completed survey measures of emotional experience, expression, and regulation. These measures were collected after the completion of procedures for the present study and are not included here.

Procedure

Session 1: After consent procedures, participants were connected to the physiological recording equipment. The procedure is depicted in Figure 1. First, participants rated emotionally-neutral photos during a 3-minute “*vanilla baseline*” task, and then completed a 4-minute “*paced breathing baseline*” task to assess baseline RSA (Diamond & Otter-Henderson, 2007). Next, they were exposed (“*initial exposure*”) to one of the sad stimuli (sad autobiographical memory or sadness-inducing film clip; order was counterbalanced across participants). After a 1-minute rest period, participants were assigned to a regulation condition (“*regulate*”), and after another 1-minute rest period they were re-exposed (“*immediate reexposure*”) to the stimulus. Following another 4-minute *paced breathing baseline* task, participants were exposed to the other sad stimulus (“*initial exposure*”), were asked to engage in the same assigned regulation strategy (“*regulate*”), and were re-exposed to the second stimulus (“*immediate reexposure*”). Following each epoch, participants self-reported on their emotions as described above.

Initial exposure: For the autobiographical memory stimulus, participants were asked to “remember a recent, specific time in your own life when you felt very sad about something. Now I want you to spend a few minutes remembering the event in detail. Just concentrate on reliving the event in your mind. Go back to the moment when you felt the most sad and stay there.” For the film stimulus, they were told, “Now we will be showing you a short film clip. It is important that you watch the film clip carefully.” Participants watched a 2.5-minute clip

from the film *The Lion King*, which has been validated to elicit sadness (Rottenberg et al., 2007).

Regulation condition: During the regulate epoch, participants were randomly assigned to one of four conditions. In the **narrate** condition, they were told to “Write about [your own experience that you just recalled] [your experience while watching this video clip]. Write about what happened, how you felt about it, and what it meant to you.” Participants in the **reappraise** condition were told to “[Think again about that time when you felt sad] [Now we’re going to show you that film clip again]. This time, try to adopt a detached and unemotional attitude as you [remember the event] [watch the film]. In other words, think about [what happened] [what you are seeing] in such a way that you don’t feel anything at all.” Participants in the **distract** condition were told to “Think about an experience in your own life that was very positive. Once you’ve picked this experience, spend some time writing about it. Write about what happened, how you felt about it, and what it meant to you.” Participants in the **reexposure control** condition were told “Think again about that experience when you felt sad. Remember the event in detail, just concentrate on reliving the event in your mind” or “Now we are going to show you that film clip again. Remember, it is important that you watch the film clip carefully”.

Immediate reexposure: Regardless of condition, immediate reexposure to memory was prompted as follows: “Now think again about that specific time when you felt sad. Spend some time remembering the event in detail. Just concentrate on reliving the event in your mind. Go back to the moment when you felt the most sad and stay there.” Immediate reexposure to film was prompted as follows: “We are going to start the same clip again for you to watch. It is important that you watch the film clip carefully.”

Conclusion of Session 1: After the immediate reexposure epoch, the physiological equipment was removed. Participants completed the manipulation check, provided a title for their autobiographical memory, and reported how long ago this sad memory had occurred. Participants were then compensated for their participation in session 1 and dismissed.

Session 2: Approximately one week later, participants returned to the laboratory, were connected to the physiological recording equipment, and completed a 3-minute “*vanilla baseline*” and 4-minute “*paced breathing baseline*”. Then they were re-exposed (“*delayed reexposure*”) to the same sad memory and film clip from session 1; order of stimulus presentation was the same as in session 1 (see Figure 1).

Delayed reexposure: Regardless of condition, the prompt for delayed reexposure to memory was: “When you were in here last, we asked you to remember a recent, specific time in your own life when you felt very sad about something. You named that time [memory title as provided at the end of session 1]. Now I want you to spend a few minutes remembering the event in detail. Just concentrate on reliving the event in your mind. Go back to the moment that you felt the most sad and stay there.” Delayed reexposure to film was: “As we did last time, we will now be showing you a short film clip. It is important that you watch the film clip carefully.”

Conclusion of Session 2: After delayed reexposure, physiological equipment was removed, and participants completed measures of emotional experience, expression, and regulation that are not included here, were debriefed and compensated for session 2.

Study 1 Results

Preliminary Analyses—Chi-square analysis of the manipulation check indicated that participants accurately reported engaging in their assigned regulation condition $\chi^2(1, 84) = 210.2, p < .001$. Recalled events varied in terms of when they occurred, but time since event was not related to regulation condition, $F(3,88) = 0.2, p > .05$ or self-reported sadness, $r = .008, p = .94$ at elicitation.

To evaluate the effectiveness and specificity of the emotion elicitation, participants' baseline and elicitation ratings of the five negative emotions were examined in a General Linear Model [GLM] with epoch (baseline and elicitation) and emotion (anger, sadness, guilt, fear, shame) as within-subjects factors. Significant effects of emotion, $F(8,712) = 42.9, p < .001, \eta^2 = .30$, epoch, $F(2,88) = 97.6, p < .001, \eta^2 = .69$, and their interaction, $F(8,712) = 38.9, p < .001, \eta^2 = .30$, were found. Sadness was more strongly endorsed than any other negative emotion for both memory and film (all pairwise comparisons, p 's $< .001$). Ratings of negative emotions were higher after elicitation than at baseline (p 's $< .001$). Finally, sadness was significantly higher than all other negative emotions at elicitation but not at baseline.

The Effects of Emotion Regulation Strategies on Self-Reports of Sadness across Epochs—Self-reports of sadness were analyzed in a multivariate general linear model as a function of epoch (session 1 baseline, initial exposure, regulate, immediate reexposure, session 2 baseline, delayed reexposure), stimulus-type (film, memory), and regulation condition (narrate, reappraise, distract, reexposure control), with epoch and stimulus-type as within-subjects measures and regulation condition as a between-subjects measure. A standard alpha level of .05 was employed for all main analyses; F values are reported in terms of Pillai's Trace values.

Means and standard deviations for self-reported sadness as a function of condition and epoch are shown in Table 1; the pattern of effects is presented in Figure 2. Results revealed a main effect of stimulus, $F(1,85) = 14.0, p < .001, \eta^2_{\text{partial}} = .14$, due to the autobiographical memory eliciting more intense self-reported sadness, $EMM(SEM) = 3.2(.10)$ than the film clip, $EMM(SEM) = 2.8(.11)$. Additionally, a main effect of condition, $F(3,85) = 4.2, p < .01, \eta^2_{\text{partial}} = .13$, was due to the reappraise condition eliciting lower reported sadness, $EMM(SEM) = 2.4(.21)$, than the narrate, $EMM(SEM) = 3.3(.16)$, and reexposure control, $EMM(SEM) = 3.4(.20)$ conditions, but not differing from the distract condition, $EMM(SEM) = 3.0(.21)$. A main effect of epoch, $F(5,81) = 78.67, p < .001, \eta^2_{\text{partial}} = .83$, was due to increases in sadness from baseline to elicitation, decreases in sadness from elicitation to regulation, and decreases in sadness at the two reexposures relative to the elicitation epoch. An epoch $\times$ stimulus interaction, $F(5,81) = 6.0, p < .001, \eta^2_{\text{partial}} = .27$, was due to self-reports of sadness being higher for memory than for film at initial exposure, regulation, and reexposure epochs but not at baseline.

However, our main focus was on the significant epoch $\times$ condition effect, $F(15,249) = 5.8$, $p < .001$, $\eta^2_{\text{partial}} = .26$, which represents the key omnibus test for all three of our hypotheses. We conducted a series of more specific comparisons to test specific aspects of each hypothesis. Pairwise comparisons of epochs, separately for each regulation strategy, were conducted to assess whether each strategy was successful at downregulating self-reported sadness both concurrently and in lasting ways. A standard alpha criterion of $p < .05$ was used for these analyses, and all differences reported below were statistically significant.

In terms of the concurrent effectiveness of regulation strategies, as seen in Table 1, sadness was reported as significantly lower during regulation, as compared to elicitation, for the narrate, reappraisal, and distract conditions, but this was not the case for the reexposure control condition, where sadness during regulation was not different from sadness during elicitation. These results were consistent with H1.

In terms of the lasting effectiveness of regulation strategies (H2), as can be seen in Table 1, sadness at immediate reexposure was significantly lower than at elicitation for the narrate and reappraise conditions, p 's $< .05$, but not for the distract or reexposure control conditions. However, at delayed reexposure, sadness was significantly lower than at elicitation for the narrate and reexposure control conditions, p 's $< .05$, while for both the distract and reappraise conditions, delayed reexposure sadness was not different than sadness at elicitation. These findings confirmed H2 for the narrate and distract conditions, but not for the reappraise or reexposure control conditions.

To test H3, we examined the univariate F-tests for the effect of condition during the regulate epoch, $F(3,85) = 28.5$, $p < .001$, $\eta^2 = .50$. Pairwise comparisons revealed that during regulation, participants in the reappraise and distract conditions reported lower levels of sadness than did participants in the narrate condition, p 's $< .01$. This is consistent with H3. Additionally, we examined whether conditions differed significantly during the immediate and delayed reexposure epochs. They did for the immediate reexposure epoch, $F(3,85) = 3.4$, $p < .05$, $\eta^2 = .11$, but not for the delayed reexposure epoch, $F(3,85) = 1.6$, $p > .18$, $\eta^2 = .05$. During immediate reexposure, participants in the reappraise condition reported significantly lower sadness than participants in the distract condition, $p < .01$.

Controlling for Stimulus Order: The above pattern of findings holds when including stimulus order. A significant interaction of order and stimulus emerged, $F(1,81) = 5.7$, $p < .02$, $\eta^2 = .07$, reflecting the fact that among those participants who saw the film first, the film elicited less intense sadness, $EMM(SEM) = 2.7(.17)$ than the memory, $EMM(SEM) = 2.3(.15)$. For those who recalled a personal event first, the two stimuli elicited comparable levels of sadness, $EMM(SEM) = 3.1(.15)$ and $3.0(.16)$ for the memory and film, respectively.

Study 1 – Discussion

In sum, all three regulation strategies resulted in reduced subjective sadness during the regulation epoch when compared with reexposure, although narration was less concurrently effective than reappraisal and distraction. Descriptively, all regulation conditions also showed some degree of rebound, but for the narrate and reappraisal conditions, self-reported sadness at immediate reexposure remained significantly lower than at elicitation.

Participants in the reexposure control condition also showed reductions in sadness at the delayed reexposure, suggesting that desensitization due to repeated exposure eventually emerges. Importantly, this last finding also suggests that the effectiveness of the other regulation strategies is not likely to have been due to mere desensitization.

Study 2-Regulation of Anger

The results of Study 1 suggest that narration can reduce subjective sadness in lasting ways but is less concurrently effective than reappraisal or distraction. Study 2 examines narration for regulating anger. Anger experiences are narrated in ways that differ from the way sadness is narrated (Habermas et al., 2009; Fivush et al., 2003), and these differences suggest two conflicting expectations about the effectiveness of narrative for down-regulating anger.

Anger and sadness typically occur at different points in a narrative. Because sadness is an outcome emotion, narratives about sadness are likely to end with the sad part of the experience, rather than when the sadness has been resolved. By contrast, expressions of anger in narratives typically occur mid-way through the narrative, in the complicating moments of the story, and the anger is then resolved by the end of the narrative (Habermas et al., 2009). These differences in the place where emotions are typically expressed in narrative suggest that narrative might be more effective for down-regulating anger than sadness. However, findings of mother-child co-narration of sadness and anger experiences suggest that sadness co-narrations focus more on coping, while anger co-narrations emphasize the emotion and its relation to the self (Fivush, Berlin, Sales, Mennuti-Washburn & Cassidy, 2003). These findings suggest that narratives about angry experiences may retain more potential for re-igniting anger than narratives about sadness, making narration less effective for the lasting down-regulation of anger than sadness. Based on these findings, our primary three hypotheses for anger reflected slightly modified expectations. As in Study 1, we expected that during regulation all three strategies, but not the reexposure control condition, would effectively reduce anger relative to elicitation (H1). We expected that reappraisal participants would show lasting reductions in anger over subsequent reexposures, while those in the distract and reexposure control conditions would not (H2). However, we were unsure about the lasting effects of narrative on anger given the two studies reviewed above. Finally, as in Study 1, we expected that given variation in narratives, the narrate condition might be less concurrently effective than reappraisal and distraction (H3).

Method

Participants—One hundred participants were recruited and reimbursed similarly to Study 1. The data for 11 participants were excluded due to missing data. The final sample included 89 participants (42 males, M age = 21.6, SD age = 3.09). Participants identified as European American (69%), Latino/a (11%), Asian American (3%), or as having multiple ethnicities (10%); the remainder reported “other” ethnicities or did not respond. Participants were randomly assigned to a regulation condition, with roughly equal distribution of males and females across the conditions (narrate, n = 29, reappraise, n = 20, distract, n = 21, and

reexposure control, $n = 20$). Note that the narrate condition was oversampled as in Study 1. Presentation order of stimuli (memory or film first) was counterbalanced across participants.

Measures and Procedures—As with Study 1, the primary measure for this study involved self-reported anger, on a scale from 1 (not at all) to 7 (extremely), across the initial exposure, regulate, immediate reexposure, and delayed reexposure epochs. Participants also rated the extent to which they felt sad, guilty, ashamed, scared and happy. Ratings of these other negative emotions at baseline and elicitation provide evidence of discriminant validity for our single-item rating of anger; ratings of these emotions during regulation and the reexposure epochs are not discussed. Manipulation checks were identical to those used in Study 1. As in Study 1, physiological data were collected during both sessions and participants also completed measures of emotional expressivity and regulation at the end of the sessions; those data are not reported here.

The procedures used in Sessions 1 and 2 were also identical to those used during Study 1, except the target emotion was anger. During the initial exposure to the memory stimulus, participants were asked to “Remember a recent, specific time in your own life when you felt very angry at someone. Now I want you to spend a few minutes remembering the event in detail. Just concentrate on reliving the event in your mind. Go back to the moment when you felt the most angry and stay there.” During the initial exposure to the film stimulus, they watched a 4-minute clip from *My Bodyguard*, which has been validated to elicit anger (Rottenberg et al., 2007).

Study 2 Results

Preliminary Analyses: Manipulation Check and Elapsed Time Since Angry Event—Chi-square analysis of the manipulation check indicated that participants accurately reported engaging in their assigned condition $\chi^2(1, 79) = 163.16, p < .001$. Participants reported that their recalled angry events had occurred: less than a week ago (19%), 1 week to 1 month ago (26%), 1 month to 6 months ago (27%), 6 months to 1 year ago (10%), and more than 1 year ago (18%). Elapsed time since the angry event did not vary by condition, $F(3,85) = 0.5, p > .01$, and was not related to self-reported anger, $r = -.04, p = .70$, during initial exposure.

To evaluate the emotion elicitation, baseline and elicitation ratings of the five negative emotions were examined in a GLM with epoch (baseline and elicitation) and emotion (anger, sadness, guilt, fear, shame) as within-subjects factors. The results revealed significant effects of emotion, $F(8,648) = 32.2, p < .001, \eta^2 = .78$, epoch, $F(2,80) = 79.3, p < .001, \eta^2 = .67$, and their interaction, $F(8,648) = 34.4, p < .001, \eta^2 = .79$. In general, anger was more strongly endorsed than any other emotion for both memory and film stimuli (all pairwise comparisons, $p < .002$). One exception to this involved anger and sadness in response to the film, where participants reported similar levels of anger and sadness across baseline and elicitation epochs ($p = .13$). Ratings of negative emotions were higher after elicitation than at baseline. To follow up the interaction, we examined differences between ratings of anger and all other emotions at baseline and immediately following elicitation. At baseline, the pattern of differences between anger and the other emotions was not systematically different. At

elicitation, anger was higher than all other emotions for both memory and film elicitations (p 's < .001).

The Effects of Emotion Regulation Strategies on Self-Reports of Anger—Self-reports of anger were analyzed with a multivariate general linear model as a function of epoch, stimulus-type, and regulation condition, with epoch and stimulus as within-subjects measures and condition as a between-subjects measure. A standard alpha level of .05 was employed for all main analyses and pairwise comparisons; F values are reported in terms of Pillai's Trace values. Table 3 provides descriptive statistics for self-reported anger, and Figure 4 displays estimated marginal means of self-reported anger as a function of epoch and condition.

The GLM of self-reported anger yielded a significant effect of epoch, $F(5,77) = 79.1$, $p < .001$, $\eta^2_{\text{partial}} = .84$, and significant epoch $\times$ condition, $F(5,237) = 4.8$, $p < .001$, $\eta^2_{\text{partial}} = .23$, epoch $\times$ stimulus, $F(5, 77) = 2.6$, $p < .05$, $\eta^2_{\text{partial}} = .15$, and epoch $\times$ condition $\times$ stimulus, $F(15,237) = 1.7$, $p = .05$, $\eta^2_{\text{partial}} = .10$, interactions. The stimulus by epoch interaction was due to stimulus differences during the immediate reexposure epoch, $F(1,81) = 7.4$, $p < .01$, $\eta^2 = .08$, with memory stimuli eliciting more intense anger, $EMM(SEM) = 4.7(.19)$ than film stimuli, $EMM(SEM) = 3.3(.18)$.

Our hypotheses are related to the epoch $\times$ condition effect, reporting on pairwise comparisons below. As shown in Figure 3, participants in all conditions reported similar levels of anger at baseline and initial exposure, with self-reported anger higher at initial exposure than at baseline. Consistent with H1, and as shown in Table 2 and Figure 3, all regulation strategies, but not the reexposure control condition, resulted in significantly reduced anger during regulation (p 's < .05).

In terms of the lasting effectiveness of regulation strategies (H2), as can be seen in Figure 3, anger at immediate reexposure was significantly lower than at elicitation for the reappraise condition, p 's < .05, but not for the distract, reexposure control, or narrate conditions. At delayed reexposure, anger remained significantly lower than at elicitation for the reappraise condition, and became significantly lower for the reexposure control participants. For the narrate and distract participants, anger at delayed reexposure was not different from anger at elicitation. These findings confirmed H2 for the reappraisal and distract conditions, but not for the reexposure control condition, and they suggest that narrating anger does not yield lasting effects.

To test H3, we examined the simple effect of condition within each regulation condition separately for the regulate, immediate reexposure, and delayed reexposure epochs. These tests showed that the regulation conditions only differed during the regulation epoch, $F(3,81) = 12.4$, $p < .001$, $\eta^2 = .32$, all other tests $F < 2$, p 's > .10. Pairwise comparisons of self-reported anger in the regulate epoch revealed that participants in the narrate condition reported significantly higher anger than participants in the distract condition, but did not differ from those in the reappraise condition, $p = .11$.

Effects involving stimulus were not our focus, however, examination of the stimulus by epoch by condition interaction revealed differences between reported anger for memory and film stimuli for the distract participants during the first baseline epoch, $F(1,81) = 4.8, p < .05, \eta^2 = .06$, with participants reporting greater anger at the film baseline, $EMM(SEM) = 1.9(.20)$ than at the memory baseline, $EMM(SEM) = 1.4(.18)$. In addition, reappraise participants reported differential anger for film and memory stimuli during the session 1 baseline epoch, $F(1,81) = 5.1, p < .03, \eta^2 = .06$, the immediate reexposure epoch, $F(1,81) = 11.9, p < .01, \eta^2 = .13$, and the session 2 baseline epoch, $F(1,81) = 7.2, p < .01, \eta^2 = .08$. During the session 1 baseline, reappraise participants reported greater anger in the film condition, $EMM(SEM) = 1.7(.20)$ than the memory condition, $EMM(SEM) = 1.1(.18)$. During immediate reexposure for the reappraise condition, participants reported more anger in response to the memory, $EMM(SEM) = 3.6(.41)$, than the film, $EMM(SEM) = 2.4(.39)$. During the session 2 baseline, reappraise participants again reported greater anger in the film condition, $EMM(SEM) = 1.4(.16)$ than in the memory condition, $EMM(SEM) = 1.0(.13)$. In sum, stimulus effects were present but were largely attributable to unanticipated differences at baseline (prior to the stimulus presentation), or to the less intense emotion evoked by the film stimulus at reexposure. These effects are not further discussed.

As with Study 1, we also examined whether including stimulus order resulted in any changes to these effects, and it did not. A stimulus by stimulus order interaction did emerge, $F(1,77) = 6.2, p < .02, \eta^2 = .08$. Follow-up comparisons showed that regardless of stimulus order, memories elicited similar levels of anger, $EMM(SEM) = 2.7(.15)$ and $2.7(.14)$ for participants in the film-first and memory-first orders, respectively. Films, however, elicited significantly more anger among participants in the memory-first order, $EMM(SEM) = 2.9(.15)$, compared to those in the film-first order, $EMM(SEM) = 2.5(.15)$.

Study 2 - Discussion

The results of Study 2 are broadly consistent with those of Study 1. As in Study 1, all three regulation strategies resulted in reduced subjective anger during the regulate epoch, and narration was less concurrently effective than distraction. However, narrative and reappraisal were not significantly different, suggesting that narrative may be relatively more effective for immediate regulation of anger than for sadness. Also as in Study 1, mere reexposure was not associated with reduced anger at immediate reexposure, but participants in this control condition showed reduced reported anger at delayed reexposure when compared to initial exposure. In contrast to Study 1, reappraisal was associated with reduced reported anger at immediate and delayed reexposure; in other words, only reappraisal yielded lasting effects on subjective anger, whereas narration did not; these effects must be interpreted with caution given the absence of between-condition differences during either reexposure epoch.

Study 3 - Does the Effectiveness of Narration for Emotion Regulation Depend on the Kind of Story People Construct?

Both the expressive writing literature (e.g., Smyth & Pennebaker, 2008) and the narrative and well-being literature (e.g., McLean et al., 2007) suggest that the effectiveness of narration for regulating emotion might depend on the features of the narrative constructed,

such as the expression of negative emotion, the construction of positive meanings, and closure. In the analyses below, we combined the data from the narrate condition in studies 1 and 2 to conduct a preliminary examination of the associations between the relative effectiveness of narration as an emotion regulation tool and the features of the narratives.

Methods

Participants and Measures—For these analyses, we focused on the 61 participants that had been assigned to the narrate condition in Studies 1 and 2 and their self-reported sadness or anger. Three aspects of narratives were assessed. *Negative emotional expressiveness* was assessed via negative emotion word-use, as measured by the Linguistic Inquiry and Word Count (LIWC) program (Francis & Pennebaker, 1997). *Positive meaning-making* was assessed via LIWC indices of positive emotion word-use. *Closure* was assessed via LIWC indices of past, present, and future tense. These indicators have been employed broadly in previous narrative research (e.g., Pasupathi, 2007; Smyth & Pennebaker, 2008; Barclay & Skarlicki, 2009), and show good associations with observer-ratings (Francis & Pennebaker, 1997) as well as with contextual- and individual-difference factors (Pasupathi, 2007; Pennebaker & King, 1999; Pillemer, 2003). Preliminary analyses suggested that cognitive word use, a potential indicator of meaning-making, was uncorrelated with negative emotion and was not further examined.

Study 3 Results

Analyses were done separately for film and memory because they represent distinct contexts for narrative construction. Whereas the narration of the emotion elicited by a film-clip represents a first-time narrative construction, the narration elicited by an autobiographical memory is more likely to reflect the impact of prior narrations of that same event.

Preliminary Analyses—The average length of time participants spent writing about the film clip (5 minutes and 29 seconds) and the memory (6 minutes and 54 seconds) was not related to reported emotional distress, $r's = -.17$ and $.13$, $p > .05$ for film and memory, respectively, during the regulate epoch. Inter-correlations among the various LIWC indicators are presented in Table 3. Based on the correlations, and to avoid collinearity, indices of present and future tense-use were excluded from the HLM analyses.

Hierarchical Linear Modeling of Relations between Narrative Features and Changes in Self-Reported Emotional Distress Across Epochs—Hierarchical linear modeling was used to predict changes in self-reported emotional distress (anger or sadness) over time as a function of narrative features. This approach allowed us to model emotional distress as declining across the epochs in the study (elicitation, regulation, reexposure, delayed reexposure), and to examine whether indicators of negative emotional expressiveness, positive meaning-making, and closure moderated the steepness of that decline. We focused on three LIWC indices: negative emotion language (expressivity), positive emotion language (positive meaning-making), and past tense language (closure).

At Level 1, we examined reported emotional distress as a function of epoch. At Level 2, we examined the contributions of positive emotion language, negative emotion language, and

past tense language to the slope for epoch. In addition, we included the target emotion (anger or sadness) as a Level 2 predictor for both the intercept and the epoch slope term – this is akin to controlling for the study from which participants were drawn. Error terms were modeled for all effects to evaluate whether there was remaining variance to be predicted. Order did not yield significant effects and was not included. The equations for both models were as follows:

$$DSTRS_{ti} = \pi_{0i} + \pi_{1i} * (EPOCH_{ti}) + e_{ti} \quad \text{Level-1 Model}$$

$$\pi_{0i} = \beta_{00} + \beta_{01} * (EMOTION_i) + r_{0i} \quad \text{Level-2 Model}$$

$$\pi_{1i} = \beta_{10} + \beta_{11} * (POSEMO_i) + \beta_{12} * (NEGEMO_i) + \beta_{13} * (PAST_i) + \beta_{14} * (EMOTION_i) + r_{1i}$$

$$DSTRS_{ti} = \beta_{00} + \beta_{01} * EMOTION_i + \beta_{10} * EPOCH_{ti} + \beta_{11} * POSEMO_i * EPOCH_{ti} + \beta_{12} * NEGEMO_i * EPOCH_{ti} + \beta_{13} * PAST_i * EPOCH_{ti} + \beta_{14} * EMOTION_i * EPOCH_{ti} + r_{0i} + r_{1i} * EPOCH_{ti} + e_{ti}$$

Mixed Model

The results for analyses of film-narratives and memory-narratives are shown in Table 4, which displays the final coefficients and robust standard errors from the HLM analyses. There was no overall linear effect of epoch across individuals, but individual differences in narrative features significantly influenced the linear effect of epoch. As shown in Table 4, for memory-narratives, greater use of positive emotion language was related to steeper declines in distress across epochs, and greater use of past-tense language tended to relate to steeper declines in distress across epochs ($p < .08$). In addition, the type of target emotion mattered, with participants in the sadness study reporting more distress than those in the anger study. Finally, significant variability between participants remained for both the distress intercept, $\chi^2(58) = 142.73$, $p < .001$, and the epoch effect, $\chi^2(55) = 83.98$, $p < .01$, after accounting for narrative features.

For film-narratives, greater use of past-tense language was associated with steeper declines in distress across epoch. By contrast, negative emotion language-use was associated with shallower declines in distress across epochs. No other significant effects were observed. Moreover, although there was significant remaining variability between individuals for the intercept for distress, $\chi^2(58) = 177.20$, $p < .001$, there was no longer significant variability between individuals remaining for the epoch effect, $\chi^2(55) = 66.06$, $p = .15$.

Study 3 Discussion

These results suggest that closure, as indicated by greater use of past tense vocabulary, is linked to more effective down-regulation of distress for films, and tends to be related to more effective down-regulation for personal memories as well. Further, for personal experiences (but not for films), positive meaning-making, as indicated by positive emotion language-use, may be important for effective down-regulation. More generally, findings suggest that narration may be a less than uniformly effective strategy for down-regulating distress due to individual differences in narrative construction. These findings have important implications for how to think about narrative as an emotion regulation strategy in general.

General Discussion

The studies reported here were designed to evaluate whether narrative is an effective strategy for downregulating negative emotions. Narrating was consistently associated with lower self-reported anger and sadness, compared to the initial elicitation, while participants were narrating. But when compared to other well-investigated strategies, narrative was only moderately successful, as distraction and reappraisal consistently yielded larger reductions in distress. This varying effectiveness may be partially explained by individual differences in how people construct narratives about negative experiences. Our linguistic analysis of the narrative data from both studies supports this interpretation. Narratives that place events in the past, rather than in the present or extending to the future, more effectively diminish the distress associated with those emotions for films, and to some extent for memories. For memories, positive meaning-making was also important for reduced distress. It makes sense that this occurred primarily for personal memories rather than films, given that participants can narrate personal events in ways that emphasize positive consequences or mixed emotions; such complexity makes less sense for a film clip designed to target a specific emotion (Rottenberg et al., 2007).

Broadly, links between closure or resolution and positive meaning-making and the reduction of emotional distress are consistent with the literature on narrative and well-being (see Bauer & McAdams, 2004a; Lilgendahl & McAdams, 2011; McLean et al., 2007; Smyth & Pennebaker, 2008). Our studies allowed us to separate the distress evoked by the event from the distress during the narration of the event, and to examine how narrative influenced emotional responding to memories and films over the course of time, within the same person. Compared to previous studies, our data provide stronger evidence that closure and positive meaning-making lead to reduced distress rather than merely reflecting it. One implication is that narrative may be linked to well-being by reducing emotional distress related to negative experiences.

Only some kinds of stories appear to reduce distress effectively. In fact, our findings suggest there may be “wrong” ways to narrate – and these are linked to expressivity. In particular for films, higher levels of expression of negative emotion were linked to shallower declines in distress over time. This may seem counterintuitive, given that narrative work and expressive writing research have emphasized the functional importance of expressing distress (Lilgendahl & McAdams, 2011; Pals, 2006; Smyth & Pennebaker, 2008). More speculatively, narrating could intensify and exaggerate distress, particularly if people narrate

in ruminative ways, perseverating on negative emotions (Nolen-Hoeksema et al., 2008). Thus our data suggest that there may be better and worse ways to use narration for emotion regulation. Given the exploratory nature of our analyses, we did not test interactions, and thus our findings do not address more complex possibilities, such as the need to both express negative emotion and find positive meanings.

In fact, the findings for narration suggest that when narrating works to reduce distress, it may actually operate in ways that are connected to specific types of reappraisal. The relation of positive emotion language to steeper declines in distress for memory stimuli suggests links to benefit-finding and positive reconstruals (Davis et al., 1998; McRae et al., 2012). Our findings on past tense language, however, suggest a unique benefit from narrative, which requires people to place events in temporal context – to put the past in the past. This is consistent with social psychological work showing that temporal distancing from past selves leads to a reduction of the influence of those selves on current functioning (Ross & Wilson, 2002).

In terms of lasting power, narration appeared to reduce subjective distress in lasting ways for sadness, but not for anger. This is consistent with work suggesting that sadness conversations, which focus more on coping (Fivush et al. 2003), may help downregulate sadness both concurrently and in lasting ways. By contrast, narratives about anger may retain more potential emotional intensity given their emphasis on the emotion itself.

Other approaches to down-regulating distress: Reexposure, Distraction, and Reappraisal

Our data also add to the literature on the effectiveness of mere reexposure, distraction, and reappraisal. Many emotion regulation strategies, including reappraisal and narration, involve re-engaging with an emotional stimulus, in which reductions in distress may be due to desensitization. Our findings from a reexposure control condition consistently ruled out this alternative explanation. Across both types of emotion elicitation and both emotions, the reexposure control condition was not systematically associated with reductions in distress as compared to distress at initial elicitation. When effects of the reexposure control were observed, they were evident only at delayed reexposure. By contrast, all regulation strategies resulted in concurrent reductions in distress. So, mere desensitization is not likely to be at the basis of the observed effectiveness of other regulation strategies and, consistent with the clinical literature, desensitization appears to take time and multiple exposures (e.g., Foa & Cahill, 2006).

As we hypothesized, distraction was effective in reducing distress while participants were distracting themselves, but did not have lasting effects. In fact, people in this condition responded to reexposure with levels of distress that were as high as their initial responses, consistent with previous work (e.g., Kross & Ayduk, 2008). Overall, these findings confirm that distraction results in temporarily feeling better (; Kross & Ayduk, 2008; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008; Strick et al., 2009) but because it leaves people vulnerable to reminders of a negative event, it is not necessarily an effective substitute for other ways of responding to negative emotional experiences. Finally, consistent with previous work (e.g., Gross, 2001; Kross & Ayduk, 2008; Ray et al., 2008), reappraisal in our

studies was effective at down-regulating sadness and anger and showed some evidence of lasting effectiveness.

Limitations of the present studies

Our choice to use written narration has the advantage of showing the effects of narration independently of social support processes, but limits our findings to narration in solitary contexts. Narration of emotional events typically happens in a social context – with listeners (Pasupathi, 2003; Rimé et al., 1998), and previous research suggests that attentive listeners promote closure (Pasupathi, 2007) and help narrators to make positive meaning of difficult experiences (Nils & Rimé, 2012; Weeks & Pasupathi, 2011). Thus, our study may have tested narration under the most challenging circumstances – those in which the risks for ruminative narration were higher and social support for meaning-making and closure was absent. Further, with somewhat limited power, we were not able to test more complex models for decreases in distress in our combined analyses, and testing such models would provide more precise information about how specific features of participants' narratives were linked to both the steepness of declines in distress and the asymptotic aspects of those declines.

As a distraction task, we asked participants to narrate a positive memory. While this permitted us to control for effects of mere narrative creation on emotion, distraction outside the laboratory can take multiple forms, from focusing on an emotionally neutral, cognitively demanding task to engaging in substance abuse. So, the effects of other types of distraction could be different. Nonetheless, most previous work on various types of distraction consistently finds patterns like ours – distraction is effective while in use, but its benefits do not last.

Finally, to compare narrative to reappraisal, we chose a reappraisal instruction that was developed by other laboratories (Ray et al., 2008), linked to reductions in negative emotion (McRae et al., 2012), and more distinct from narration than benefit-finding reappraisal instructions. Thus, our findings may not be generalizable to benefit-finding reappraisal instructions. Further, though we did ask that participants think differently about the emotional event in order to feel nothing, we did not collect information about how participants enacted their reappraisals, further limiting our findings about reappraisal. Other research has shown that participants follow these reappraisal instructions using various tactics, but that the effectiveness of reappraisal does not vary depending on those tactics (McRae, Ciesielski, & Gross, 2012). However, future work on reappraisal would benefit from greater precision about how people reappraise (Kross & Ayduk, 2008; McRae et al., 2012).

Two other limitations also warrant mention. One is that we employed single-item self-report measures of the target emotions in both studies, which allowed us to reduce participant burden over a lengthy procedure. Although multi-item measures are generally preferable, single-item measures have been used successfully in previous work (e.g., Ray et al., 2008; MacNamara et al., 2011). Second, asking participants to repeatedly rate their emotions may introduce expectancy effects. Differential effects of the different emotion regulation strategies suggest that participants were not responding with general expectancies.

Moreover, the instructions for the reexposure control, narrate, and distract conditions did not refer to how participants should feel. However, expectancies may well operate for the reappraisal condition, where the instructions call for participants to try to ‘feel nothing.’ This issue applies to nearly all reappraisal research, because by necessity all instructions to reappraise are accompanied by some goal – whether to increase positive emotion, decrease negative emotion, or to ‘feel nothing.’

Narrative: Beyond Merely Reducing Distress

Despite these limitations, the present findings suggest both the utility and the potential pitfalls of narrating for regulating emotion, and they do so in comparison to reexposure, distraction, and reappraisal. They also leave an open question about why people engage in narration so frequently when it is less effective at reducing negative emotion. People persistently report narrating to others for the purpose of regulating emotion (Pasupathi et al., 2009; Rimé et al., 1998). While these findings could reflect people’s limited awareness and biased recall, they may also serve as reminders that efforts at regulating emotional experience entail multiple goals. Narrating emotional experiences serves to build and maintain social bonds (Bluck & Alea, 2002), to construct and shore up identity (McLean & Pasupathi, 2011; Weeks & Pasupathi, 2011), to render understandings of moral agency more complex (Pasupathi & Wainryb, 2010), and to draw meaningful conclusions that can help people make different decisions in the future (Pillemer, 2003). Thus, the ways in which people report ‘feeling better’ after narrating emotional events may hinge on a broader array of functional outcomes, with reduction of distress not always the primary goal. Reducing sadness, anger, and other forms of distress is sometimes needed, but at other times, it may be more important to draw meaning from negative emotional events. These speculations represent alternative ways in which the benefits of expressive writing may emerge (Smyth & Pennebaker, 2008; Stanton & Low, 2012). As people tell their stories, they may not always feel better, but they may find more productive ways to resolve interpersonal conflicts, to manage loss, and to pursue their goals. And along the way, they may find the support and connections with other people that are so important for human lives.

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Figure 1.
Epochs of the Session 1 and Session 2 Procedures

Figure 2. Self-Reported Sadness Estimated Marginal Means as a Function of Epoch and Regulation Condition (Averaged across Film and Memory Stimuli); Error bars indicate standard error of the mean.

Figure 3. Self-Reported Anger Estimated Marginal Means as a Function of Epoch and Regulation Condition (Averaged across Film and Memory Stimuli); Error bars indicate standard error of the mean.

Table 1
Self-Reported Sadness as a Function of Epoch, Regulation Condition, and Stimulus (Memory or Film), Study 1

	Regulation Strategy			
	Narrate Mean (SD)	Reappraise Mean (SD)	Distract Mean (SD)	Reexposure Control Mean (SD)
Memory				
Session 1 Baseline	1.78 (1.16)	1.15 (0.37)	1.42 (0.96)	1.90 (1.33)
Initial Exposure	5.09 (1.44)	4.05 (1.23)	4.95 (1.18)	4.86 (1.67)
Regulate	4.44 (1.52)	1.95 (1.00)	1.58 (1.35)	4.68 (1.86)
Imm. Reexposure	4.34 (1.57)	3.60 (1.27)	4.63 (1.80)	4.36 (2.01)
Session 2 Baseline	1.74 (1.09)	1.50 (0.95)	1.58 (1.07)	1.36 (0.66)
Del. Reexposure	4.09 (1.55)	3.55 (1.43)	4.16 (1.53)	3.91 (1.69)
Film				
Session 1 Baseline	1.91 (1.14)	1.70 (0.92)	1.79 (0.92)	2.09 (1.41)
Initial Exposure	4.09 (1.80)	3.65 (1.50)	4.37 (1.77)	3.95 (1.89)
Regulate	3.22 (1.66)	1.79 (0.85)	1.39 (0.91)	4.27 (1.72)
Imm. Reexposure	3.75 (1.74)	2.55 (1.10)	4.47 (1.71)	3.86 (1.96)
Session 2 Baseline	1.78 (0.97)	1.40 (0.82)	1.84 (1.07)	1.68 (0.95)
Del. Reexposure	3.31 (1.38)	2.65 (1.27)	3.89 (1.56)	3.05 (1.40)

Note: Imm. Reexposure = Immediate Reexposure, Del. Reexposure = Delayed Reexposure. Baseline data are drawn from the paced respiration epochs immediately prior to each elicitation.

Table 2

Self-Reported Anger as a Function of Epoch, Regulation Condition, and Stimulus (Memory or Film), Study 2

	Regulation Strategy			
	Narrate Mean (SD)	Reappraise Mean (SD)	Distract Mean (SD)	Reexposure Control Mean (SD)
Memory				
Session 1 Baseline	1.45 (0.69)	1.15 (0.37)	1.55 (1.10)	1.50 (1.10)
Initial Exposure	3.86 (1.57)	3.95 (1.28)	4.32 (1.38)	3.85 (1.78)
Regulate	3.14 (1.75)	2.10 (1.02)	1.65 (0.75)	3.80 (2.14)
Imm. Reexposure	3.55 (1.64)	3.60 (1.60)	3.95 (1.43)	3.65 (2.08)
Session 2 Baseline	1.21 (0.41)	1.06 (0.24)	1.45 (0.94)	1.10 (0.45)
Del. Reexposure	3.24 (1.43)	3.16 (1.46)	3.50 (1.67)	2.60 (1.27)
Film				
Session 1 Baseline	1.52 (0.78)	1.60 (0.88)	1.85 (1.14)	1.26 (0.56)
Initial Exposure	3.79 (1.35)	3.95 (1.47)	3.75 (1.37)	3.70 (1.81)
Regulate	3.03 (1.32)	2.50 (1.05)	1.50 (0.76)	3.85 (2.00)
Imm. Reexposure	3.41 (1.32)	2.45 (1.47)	3.65 (1.63)	3.35 (2.21)
Session 2 Baseline	1.31 (0.60)	1.35 (0.75)	1.50 (0.89)	1.10 (0.31)
Del. Reexposure	3.34 (1.45)	2.75 (1.33)	3.20 (1.44)	2.85 (2.03)

Note: Imm. Reexposure = Immediate Reexposure, Del. Reexposure = Delayed Reexposure. Baseline data are drawn from the paced respiration epochs immediately prior to each elicitation.

Table 3

Intercorrelations of LJWC indices for Films and Memories

	1	2	3	4	5
1. Positive emotion	--	-.10	-.11	.08	.05
2. Negative emotion	-.06	--	.08	.18	.22 ⁺
3. Past	-.13	.03	--	-.47**	-.37**
4. Present	.17	.05	-.77**	--	.16
5. Future	.12	-.13	-.23 ⁺	.30*	--

Correlations for Film are above the diagonal and for memories are below the diagonal;

⁺ p<.10,
* p< .05,
** p < .01

Table 4

Results of HLM Analyses for Memory and Film (Final estimates with robust standard errors).

Effect	Coefficient (SE)	t-ratio	Approx. <i>d.f.</i>	p-value
Memory				
INTERCEPT, π_0				
β_{00}	2.16 (.82)	2.63	58	.01
β_{01}	1.55 (.49)	3.11	58	<.01
Epoch slope, π_1				
INTERCEPT, β_{10}				
Positive Emotion Language, β_{11}	-.010 (.03)	-2.97	55	<.01
Negative Emotion Language, β_{12}	.02 (.02)	1.16	55	.25
Past Tense, β_{13}	-.02 (.01)	-1.76	55	.08
Study (Anger or Sadness), β_{14}	-.14 (.13)	-1.06	55	.30
Film				
Intercept, π_0				
β_{00}	3.24 (.68)	4.74	58	<.001
β_{01}	.40 (.46)	.88	58	.38
Epoch slope, π_1				
Intercept, β_{10}				
Positive Affective Language, β_{11}	.02 (.03)	.58	55	.57
Negative Affective Language, β_{12}	.02 (.001)	2.11	55	.04
Past Tense, β_{13}	-.02 (.01)	-2.01	55	.05
Study (Anger or Sadness), β_{14}	-.08 (.10)	-.80	55	.43